JOURNAL

of the

NATIONAL ASSOCIATION *of* CHIROPODISTS

M. J. LEWI, M.D.

The Official Publication of the Profession

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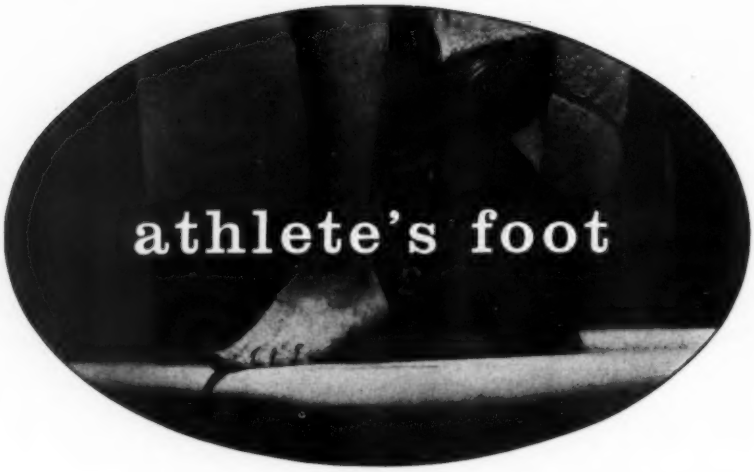
Spastic Flatfoot

Pilot Economic Survey

Techniques in Foot Rehabilitation

VOLUME 47, NUMBER 7

JULY, 1957



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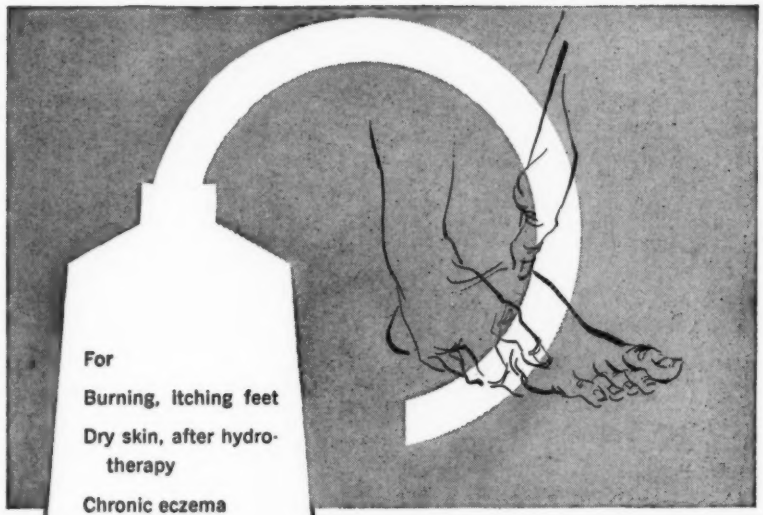

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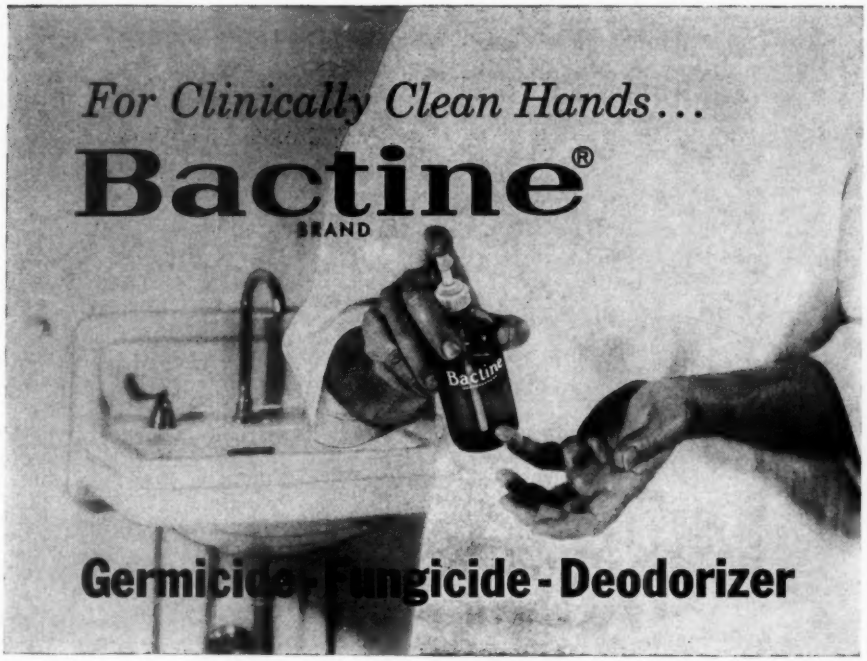

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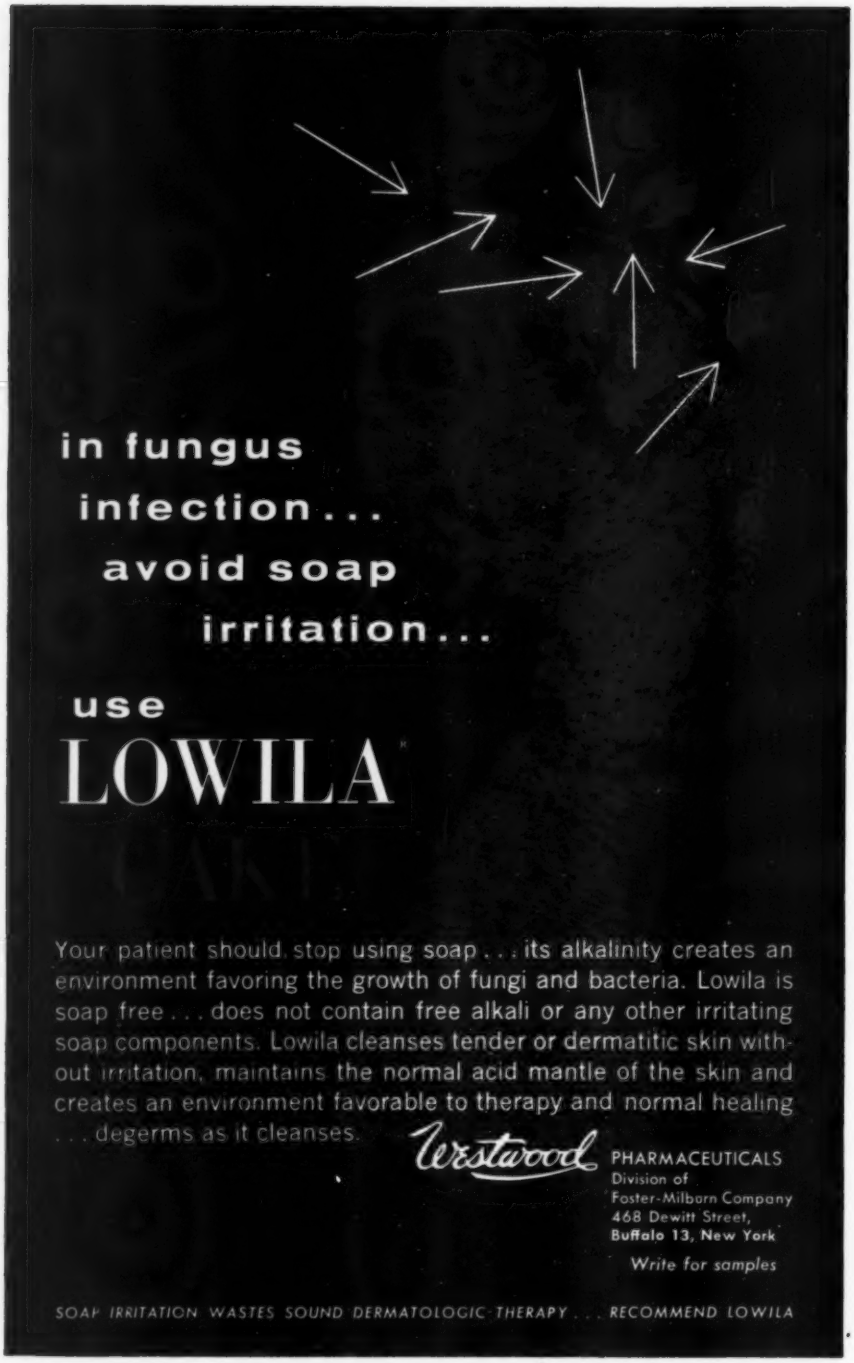
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TECHNIQUES IN FOOT REHABILITATION

KERMIT CALMENSON, Pod.D.
Brooklyn, N. Y.

Foot rehabilitation and the correction of forefoot imbalance have become practically a routine part of progressive chiropody treatment. Traction, slings, dynamic mold therapy, use of buttress pads, etc., have materially aided us in our goal of restoring, as closely to the norm as possible, foot function of patients entrusted to our care. In the past months I have, in addition to the aforementioned modalities of treatment, instituted several procedures (some with the aid of simple machines) which I have found effective in foot rehabilitation therapy.

One of these methods is based on the principle of circular exercise motion, as put forth by Runting[1] and others who advocate the movement of the big toe in a circular motion to encourage joint activity and lessen joint restriction. I have found that applying this principle in conjunction with steady traction has given highly satisfactory results. To achieve this end I have developed a motor driven apparatus which exercises the big toe and metatarsal head at an even tempo while traction is being maintained. As best results in any therapy can be more readily achieved with a relaxed patient the purposes and principles of therapy are explained to the patient, and to put him further at ease, a cut-off switch attached to the machine allows the patient complete control so that the machine can be stopped by him at any moment.

The machine has a gear motor running at twenty-two revolutions per minute (in a clockwise direction) attached to a wheel that has apertures in it. By attaching the toe to a lead from an aperture, the toe (and the metatarsal) is moved in a circular motion. The more peripheral is the aperture, the greater is the range of motion.

When the foot is attached to the apparatus, manual traction is applied. If the standard traction apparatus has been used previously it will be easier to achieve successful manual traction. By wrapping a protective device around the lower leg (sheet of foam rubber) the traction is maintained by securing the leg to a fixed position with a leather strap. By raising the metatarsal heads (one-half to three-quarters of an inch of felt) and inverting the foot a more satisfactory position may be achieved.

Radiographs reveal that when the toe is moved towards the second toe there is a widening of the metatarsophalangeal joint

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at medial side and a narrowing at the lateral. Conversely when the toe is moved away from the second toe there is a narrowing at medial side and a widening at lateral. When the toe is lowered there is a stretching motion at the dorsum of the joint and a narrowing of the joint space at the plantar surface. By continually moving the toe we have an alternate widening and narrowing of the joint, thus stretching and relaxing all the soft tissues involved in the joint, as well as the dermal structures. Also there is movement of the first metatarsal. Thus by passive exercise we are able to aid the patient in accomplishing greater forefoot mobility and easing of the skin tissues.

Having dealt with passive exercise therapy, a word now about active voluntary exercise therapy. One of the more dramatic results reported in the literature dealing with this subject is that of a case in which the foot had become one centimeter narrower following the performance of a set of exercises designed to strengthen the interosseous muscles. "First the patient acquires voluntary control over the muscles; with the foot flat on the ground, the effort is made to lift the center metatarsal heads without curling the toes and without raising the inner border of the foot. When the movement is made properly the forefoot becomes narrower, the toes extend at the interphalangeal joints and the central metatarsal heads are slightly raised. Once there is complete voluntary control it is not difficult to learn to contract the muscles at each step immediately the ball of the foot touches the ground, and after a time the action becomes reflex."[2]

Another type of exercise that is effective is used by O. G. Smith.[3] "A further useful free movement that the patient can do for himself and one that will prevent or break down adhesions which may lie on the dorsal aspect of the foot is carried out by the simple expedient of sitting on the plantar surface of the foot so that the dorsum is stretched by the body weight." (Best accomplished on a low stool.)

There are other exercises in use which have enabled a much stronger musculature to be developed. Steindler[4] writes, "In exercises . . . the practice of resistant dynamic exercise is of paramount importance in mechanical re-education of muscles. . . . In contraction (either free or against resistance) efficiency increases the more prolonged or slower the contraction; but in general we find that the maximum efficiency of contraction is obtained when the latter lasts about one and one-half seconds."

Along these lines Earl C. Elkins[5] made the following points: "Clinical exercises should be given slowly (a) to activate more muscle fibers and (b) with most weak muscles (except nervous system defects) it is best to use slow mild motion. Recently it has been shown that exercises in which high resistance is used with low number of repetitions greatly increase power of muscle as well as endurance."

Rose and Warner[6] report, "With progressive resistance exercises emphasis is placed on power development by progressively loading the muscle. . . ." The following is from their "Instructions to Patients" which I have adapted for chiropodal use: "(a) Exercise slowly (contraction one and one-half second), (b) Avoid sudden jerky motions, (c) Concentrate on the part being exercised, (d) Pause between contractions and relax the foot, (e) Total number of contractions for any one exercise period about 50, (f) Exercise only five days per week, and (g) Exert the maximum effort once a week."

The chiropodal exercise system is begun with the testing of the musculature. A plain hard towel is placed on the floor (a smooth surface is best). The heel is placed on the floor, the toes and foot (up to the heel) are on the towel. Upon the free end of the towel weights are placed. Start with

one-half pound and each time add a half pound load until the first load is established. When the first half pound load is placed on the towel the patient is instructed (and watched) as he pulls the load up to his foot (by alternately grasping the towel with his toes, next relaxing his toes and then grasping more of the towel with his toes, next relaxing his toes and then grasping more of the towel). When enough weights are placed on the towel so that the patient has a feeling of strain in moving the load, the weights are measured. That first weight load is termed the "Initial Weight Load." By taking two-thirds of the Initial Weight Load we obtain the "Initial Work Load."

The patient is instructed to use the weight (Initial Work Load) for his daily exercises. (Five days per week and two days rest.) Then he returns to the office and is watched while we obtain the next work load.

Case 1. Patient E.M., age 21, 6'4" tall, weight 155, student, works summers as a lifeguard on a public beach. On the 10th of the month his Initial Weight Load was 11½ lbs. on his right foot and 8½ lbs. on his left foot. His work load was 8 lbs. (right) and 5 lbs. (left). On the 17th his wt. load was (rt.) 17¼ lbs. and (lt.) 12½. His work load was 11 lbs. (rt.) and 8 lbs. (lt.). On the 24th his wt. load was (rt.) 19¼ and (lt.) 17¾. His work load was (rt.) 12½ and (lt.) 12. On the 31st his wt. load was 23½ (rt.) and 21½ (lt.). His work load was (rt.) 15 and (lt.) 15. On the 7th of the next month his wt. load was (rt.) 28¾ and (lt.) 25¾. His work load was 18 lbs. for both feet. The patient was instructed at the first visit to use either canned goods (which have their weight marked) or else use a combination of books to achieve the proper weight load. It was observed at the first visit (on the 10th) that E.M. used the big toe to do most of the work—the other toes hardly did any.

Fig. 1. Some examples of springs of different strengths.

On the next visit, the 17th, all the toes were functioning together. As the loads increased (about the 24th it was noticed by the patient) the foot began to perspire. He felt that made the exercise easier to perform. With the heavier loads the weights had to be distributed evenly over

the end of the towel rather than a pile in the center end of the towel.

Case 2. Patient E.B., age 46, weight 134, female, started with a weight load right 2½ lbs., left 1½ lbs. The work load used was right 1½ lbs., left 1 lb. The next week the wt. load was 3½ lbs. right and 3¼ lbs. left. The work load was 2 lbs. (both feet). The following week the wt. load was (rt.) 5¾ lbs. and (lt.) 4¾ lbs. The work load was (rt.) 3½ lbs. and (lt.) 3 lbs. The following week the wt. load was (rt.) 8¼ lbs. and (lt.) 7¼ lbs. The exercise load was 5 1/3 lbs. (rt.) and 5 lbs. (lt.).

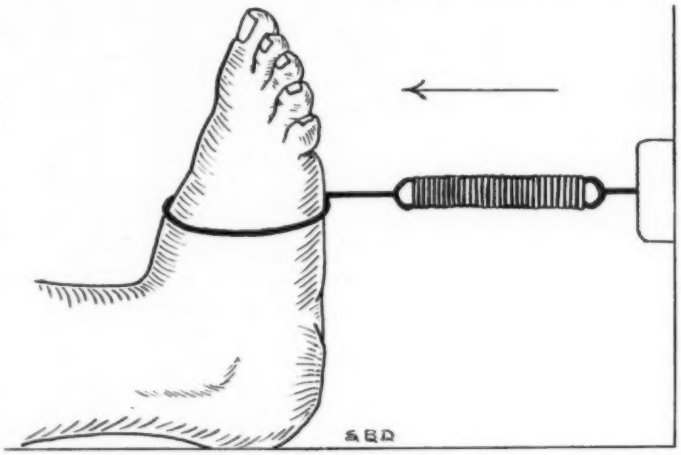

Fig. 2. Resisted Dorsiflexion

A patient in her late sixties started with a weight load of one pound. In her case the work load recommended was 2/3 lb.

As John Dryden[7] in his famous lines so beautifully put it:

"Better to hunt in fields for health unbought
Than fee the doctor for a nauseous draught
The wise, for cure, on exercise depend
God never made his work for man to mend"

For many years in England O. G. Smith has been using a type of resistive exercises for the entire body as well as the feet based on the resistance of springs. The springs are graduated (Fig. 1) by selecting different strengths. For example: In Resisted Dorsiflexion[3] "The spring is fixed (to the bottom of the bed) and a strap loop is fastened to the patient's foot. He is encouraged to move his foot against the resistance." (See Fig. 2.) The exercises can be done at home, in the office or in a hospital ward. The materials involved are expendable, simple to attach and can be done at the patient's convenience. I have made the suggestion to patients to set it up in the living room and use the apparatus while enjoying some diversion such as television, etc.

A similar device is used for Resisted Plantar Flexion[3] (Fig. 3.) for the midtarsal joint: "The patient creates his own fixation by passing the looped end of the apparatus over his crossed forearms, the other end is placed over the feet, the springs (one for each foot) are attached between these two points. The plantar flexors work in stretching the feet, both work at the same time."

There are like arrangements for resisted inversion (one foot at a time) and for resisted eversion (both feet simultaneously).

I have also used a spring for the anterior portion of the foot. The spring (coil length 3¼", end loop 5/16", coil width 6/16") is attached to the big toes. The feet are held parallel, then they are separated. By increasing the distance between the big toes there is a stretching of the ligaments

and tissues on the second toe side of the big toe. The spring keeps the toes on the stretch. Keeping the toes on the ground the effort is made to plantar flex all the toes. Thus the five toes are exercised with the big toe in a more "ideal" position.

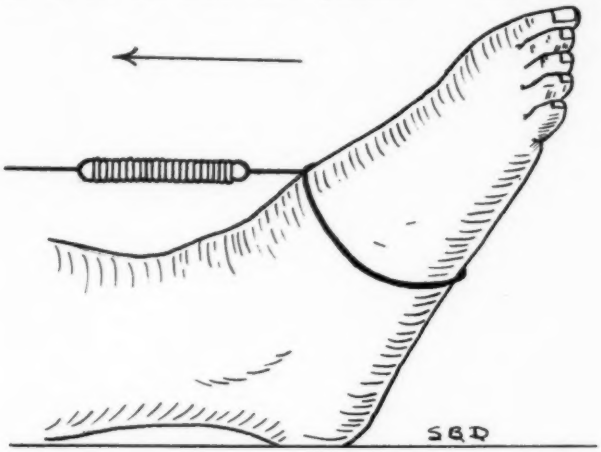

Fig. 3. Resisted Plantar Flexion

In the May, 1951 issue of the Archives of Physical Medicine F. Wirrsowitz[8] writes, "In the treatment of functional disorders of the feet exercise is of more importance than mechanical supports." There is much clinical evidence to support this view.[9] "Regular systemic exercise can bring about definite changes in the structure of the muscles. (a) It thickens and toughens the sarcolemma of muscle fibers and also increases the amount of connective tissue within the muscle. (b) Muscular activity brings about a definite increase in the size of the whole muscle. It does not increase the number of muscle fibers but it brings about an activation of the unused fibers that have been small from lack of use. (c) In order to develop strength of muscles they must be exercised against gradually increasing resistance. The development of muscles in different people differs. Small boned, tall, thin individuals reach the limit of development sooner than stocky people with large bones. (d) Training brings about an improvement in the quality of muscle contractions. Two physiologists demonstrated that the endurance of muscles with adequate blood supply increased more rapidly and reached a higher level than those without adequate blood supply. (e) It has been shown experimentally that on rabbits the training of muscles for a period of five days was sufficient to bring about a definite increase in the phosphocreatine content. (Also glyogen, nonnitrogenous substances and color of trained muscle (as compared to untrained) was changed.)"

These adaptations of techniques which have been used effectively by experts in the fields of rehabilitation and physical medicine both here and abroad can, we believe, be incorporated into the foot specialist's armamentarium to give each patient the benefit of the broadest type of therapy and relatedly.

One DeKalb Ave.

References

1. Runting, E. V.: Practical Chiropody, J. B. Lippincott Co., Philadelphia, Pa., p. 71.
2. Wiles, Philip: Essentials of Orthopaedics, Little Brown Co., Boston, Mass., 2nd edition, p. 260.
3. Smith, O. G.: Rehabilitation, Re-education & Remedial Exercises, Williams & Wilkins Co., Baltimore, Md., 1943, p. 260.
4. Steindler: Mechanics of Locomotion in Man. Chas. Thomas, Springfield, Ill., 1935, p. 112.
5. Elkins, E. C.: Phys. Med. & Rehab. for the Clinician, W. B. Saunders Co., Philadelphia, Pa., 1951.
6. Rose & Warner: Rapid Rehab. of Disabilities of Knee, J. of Kansas Med. Soc., Vol. 3, No. 2. Feb. 1951.
7. Chesterton: Epistle to John Dryden, Line 92.
8. Wirrsowitz, O. F.: Archives of Physical Med., Vol. 32, No. 5, p. 43.
9. Handbook of Phys. Med. & Rehab., Council of Phys. Med. of A.M.A., Blakiston Co., Philadelphia, Pa., 1950, p. 42.

A REVIEW OF THE PATHOGENESIS, ETIOLOGY AND TREATMENT OF SPASTIC FLATFOOT

JOSEPH R. CINZIO, D.S.C., F.A.C.F.O.
Passaic, N. J.

THE primary objectives of this paper are to enumerate some of the facts that are known about spastic flatfoot, and to reveal some of the basic or predisposing causes.

Through the years numerous synonyms have been recorded in an attempt to describe this condition, including peroneal spastic flatfoot, juvenile spastic weakfoot, spastic weakfoot of adolescents and spastic pes planus. This condition has posed many questions since Jones[1,2] called attention to its prevalence and disabling effect of the disorder.

It usually begins during adolescence and is characterized by a marked pes planus, an abduction of the forefoot and an eversion of the rearfoot, owing to constant spasm of the peronei and the extensors of the toes.

Du Vries[3] states that "there are two distinct forms of this condition, the rigid and the flexible. Under general anesthesia the spasticity of the latter disappears and the foot can readily be placed in a normal attitude, whereas, the rigid type remains fixed."

According to Harris and Beath[4], of the 3,600 candidates for military service 74 or 2% were of the rigid type and 217 or 6% were of the flexible variety. The cause of this deformity is not entirely understood. Literature is replete with treatment for it, but its etiology remains a mystery because the condition is a symptom complex rather than a disease entity, and is due to an encompassing variety of factors. Each factor may be predisposing, but it may be present in combination, yet these same factors may be present without producing the condition.

Lapidus[5] outlines nine points regarding spastic flatfoot:

1. A review of the literature regarding so-called spastic flatfoot shows variable, often contradictory, theories concerning its pathogenesis, etiology and treatment.
2. The prevailing concept is that it is a reflextory spasticity of the pronators which develops in a flaccid flatfoot as a result of irritation of the tarsal joints, attributed to faulty statics and mechanics.
3. No satisfactory explanation for the fact that the spasticity is always limited exclusively to the pronators can be found in the literature although various theories have been advanced.
4. The accepted standard treatment of the so-called spastic flatfoot has been rest, immobilization, physical therapy, manipulations, resection of the peroneal tendons or even induction of palsy of the peroneal nerve by means of injections or crushing of the nerve.
5. A review of the anatomy and mechanics of the subtalar joint shows that the interosseous talocalcaneal ligament is relaxed in pronation, and becomes tense in supination of the foot.
6. Lapidus offers the theory of the cause of the so-called spastic flatfoot as a lesion of the interosseous talocalcaneal ligament of the subtalar joint with reflex spasm of the pronators to produce relaxation of the above ligament.
7. The syndrome of spasticity of the pronators is not peculiar to flatfoot, but is often observed in normal feet or even in cases of pes cavus. Therefore, the terms "spastic subtalar lesion" or "subtalar arthritis with spasm of the pronators" are offered as more appropriate designations than spastic flatfoot.
8. Lapidus presents a classification of cases

with the method of treatment employed.

9. The lesion of the interosseous talocalcaneal ligament is the primary cause and spasm of the pronators is the consequence. Therefore, any operation designed to eliminate the action of the pronator muscles (tenotomy or interruption of the peroneal nerve) is strongly condemned as being unfounded, futile and often harmful.

In recent literature Steindler[6] has related that "skeletal deformities develop gradually by adaptation of bones to the articular disalignment. The product of this adaptation is the osseous flatfoot. The plastic bones of the young patients are more susceptible to adaptive changes which are most conspicuous in the astragalus and the scaphoid. The adult bone responds to stresses more with reactive osteoarthritic changes and marginal osteophytes. These changes are most marked at the anterior edge of the ankle joint and the upper margin of the astragaloscaphoid articulation."

Schuster[7] reveals that the possibility of a bony injury or disease should be investigated in a unilateral case of spastic or rigid flatfoot, especially if the muscular spasm began soon after direct or indirect trauma. He states that "muscular spasm often is nature's means of immobilizing a painful part and is thus found in the foot in cases of fractures of bones and in disease of the joints. Therefore, a unilateral spastic weakfoot or a foot that simulates one should always be examined with extreme care to avoid a mistaken diagnosis."

Harris and Beath[4] state that the rigid type of spastic flatfoot is always due to an anomalous talocalcaneal bridge or to a calcaneonavicular bar. Webster and Roberts[8] support this theory and feel that "the commonest cause of peroneal spastic flatfoot is a tarsal anomaly consisting of a calcaneonavicular bar or a talocalcaneal 'bridge.'" Either or both anomalies may be present.

Lewis[9] states that "besides the short metatarsal segment roentgenology has demonstrated congenital structural aberrations of the osseous mechanism which became a basis of severe soft tissue reaction and disabilities, beyond those supervening as a result of ordinary work exacted and expected of the normal foot."

Among these congenital aberrations are the navicular fusion with the anterior process of the calcaneus, posterior to the region where it rests on the sustentaculum tali (calcaneonavicular bar).

Being either unilateral or bilateral, the coalition may be one of synostosis, syndesmosis or synchondrosis (chondromosis) or one of partial synostosis and the bridge completed by cartilaginous or fibrous tissue.

While there may be some adaptive shortening of the peroneus muscle, it is thought that muscle spasm here is caused by arthritic changes in the foot (this is illustrated on lateral views of a radiograph by an eroded peak on the dorsal aspect of the head of the talus caused by the abnormal motion of the talus—a "buckling" effect).

The rigidity and angulation of the rear and forefoot alignment are caused primarily by the synostosis with peroneal spasm as a secondary phenomenon.

During the spastic stage, the peroneal spasm, exaggerating the trochlear function of its tendon, grips the foot into immovable rigidity. This lessens as normal tonus is restored to the involved musculature.

Lewis states that "some degree of structural rigidity may be present in early childhood, but it is not until the stage of growth activity and strenuous use in adolescence, sometimes resulting from torsion injuries, that symptoms appear."

"It is only when the abnormal mechanism is forced to perform normally that untoward symptoms assert themselves."

To discover roentgenographic evidence of these tarsal fusions requires special pro-

jections and Lewis[9] suggests:

1. An oblique projection of the mid-tarsal area reveals the calcaneonavicular phenomenon (bar) while a posterior, downward, 45° oblique projection brings the talocalcaneal anomaly into view. If the talocalcaneal fusion is a synchondrosis, a narrow notched line of decreased density can be seen in the lateral as well as the oblique view. In the oblique view the bone and the line of demarcation appear below their normal position. The sustentaculum tali appears greatly enlarged.

Treatment

Many surgical procedures for the correction of rigid spastic flatfoot have been recorded in the literature.

Schoolfield's[10] operation involves a shortening and reinforcement of the deltoid ligament. Du Vries mentions, that in selected cases where the tibialis anterior muscle has become paralyzed or has lost most of its power, the peroneus longus may be transplanted into the insertion of the tibialis anterior or, into the body of the first (mediel) cuneiform.

The flexible type of spastic flatfoot readily responds to conservative therapy, which usually consists of manipulation under general anesthesia, and applying plaster cast with the foot in an overcorrected position. Peroneal spasm is relieved by the injection of a local anesthetic, as Xylocaine, into the trigger points of pain and into the body of the peroneal muscles.

Locke[11] recommends the use of procaine-hyaluronidase injections and a muscle stretching device in those cases where a synostosis is not present. In the presence of a bony fusion involving the mid-tarsal region, the use of the a metal brace (Robert's plate most effective) is indicated.

Crego and Ford[12] after reviewing the end results of numerous operative procedures on 102 children's feet for correction of flatfoot concluded that, "In no case should an arthrodesing operation for flatfoot ever be done for cosmetic reasons only. These procedures should be reserved for the relief of disabling pain and then only after exhausting every means of conservative therapy."

Summary

From the previous discussion one can readily see that spastic flatfoot is indeed a syndrome. A unilateral involvement should guide the chiropodist to utilize more than one radiographic projection to determine osseous pathology. Surgical intervention should be placed at the very bottom of the methods of treatment, unless the pain is entirely disabling. Conservative management should be first and foremost in the treatment of spastic flatfoot.

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References

1. Jones, R.: Peroneal Spasm and Its Treatment, Report of Meeting of Liverpool Medical Institution held April 22, 1897, Liverpool Med. Chir. J., 17: 442, April 22, 1897.
2. Jones, R.: The Soldier's Foot and the Treatment of Common Deformities of the Foot, Brit. M. J., 1: 709, 1916.
3. Du Vries, H. L.: Flatfoot, Journal of the N.A.C., (444-445), Vol. 46, No. 7, July, 1956.
4. Harris, R. I., and Beath, T.: Etiology of Spastic Flatfoot, J. Bone and Joint Surg., 33B: 624, Nov. 1948.
5. Lapidus, P. W.: Spastic Flatfoot, J. Bone and Joint Surg., 28:126, 1946.
6. Steindler, A.: Postgraduate Lectures on Orthopedic Diagnosis and Indications, Vol. IV, Springfield, Illinois, Charles C. Thomas, Publisher, 1951.
7. Schuster, Otto N.: Foot Orthopaedics, ed. 2. Albany, N. Y., J. B. Lyon Company, 1939.
8. Webster, F. S., and Roberts, W. M.: Tarsal Anomalies and Peroneal Spastic Flatfoot, J.A.M.A., 146: 1099, July 21, 1951.
9. Lewis, M. R.: Roentgen Foot Diagnosis, ed. 1, Hammond, Indiana, W. B. Conkey Co., Div. of Rand McNally & Co., 1952.
10. Schoolfield, B. L.: Operative Treatment of Flatfoot, Surg. Gyne. & Obst., 94:136, February, 1952.
11. Locke, R. K.: Treatment of Spastic Flatfoot with Procaine-Hyaluronidase and Stretching, J.N.A.C., November, 1952.
12. Crego, C. H., & Ford, L. T.: An End Result study of Various Operative Procedures for correcting Flatfeet in Children, J. Bone and Joint Surg., 13:773, 1931.

FACTORS IN THE USE OF THE X-RAY MACHINE

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Part IV
Positioning

The art of turning out a good x-ray picture is as much dependent upon good positioning of the subject as it is upon proper adherence to sound exposure principles. A film that gives a clear view of the tarsal region in the oblique projection is of little value to us when what we want is a lateral view of the talus. Too often men settle for just such a thing as being good enough and base their diagnosis upon a partially visible bone in an approximated position.

Consider this: a good photographer will spend much time and careful study in positioning his subject so that it will show up to the best advantage. His picture when finished is clear, detailed and pleasant to the eye. In taking an x-ray we are not interested in the esthetic aspect, however, we are interested in being able to clearly see exactly what we want to see and not something that is just approximately what we want.

To achieve good positioning "sense" there are several things of which the operator must become aware: First, he must consider the relation of the subject to the film; second, the relation of the target to the film; and third, the position of the patient as related to the film and the central ray. Let us consider these three points one at a time.

Subject to Film Relationship

When taking x-rays of any part of the body distortion of the bone structure is always a problem to cope with. This distortion could be eliminated completely if we could achieve a subject to film distance of zero. A subject to film distance of zero is one wherein the distance between the bone we wish to see and the film is zero. Of course this is the ideal situation and like all ideals is hard to achieve. As a matter of fact it just can't be done in the living subject. Since that is the case we must attempt to keep the subject to film distance at the bare minimum.

The principle here is the same as it is in projecting any shadow. When casting a shadow of your hand on the wall you will notice that the farther your hand is from the wall the greater the shadow distortion. When the hand is close to the wall the shadow is clear and nearly equal to the actual size of your hand. There is no fuzziness, no grotesque enlargement. You will also notice that when the hand is far from the wall and the shadow distorted and enlarged that the distortion and enlargement can be reduced by moving the light a greater distance from the wall. The greater the light source is removed from the wall the farther you can keep your hand from the wall and still have a shadow free from distortion. Of course you must remember that the farther you move the light from the wall the stronger the light beam must become. This is in accord with our exposure principles. If you compensate for the increased distance by using a stronger light beam you will find the above to be true.

Now in applying this to radiography nothing need be changed. If the bone which you wish to visualize cannot be brought all the way down to the film you need not fear that distortion will result. The operator has only to be sure that the target to film distance is great enough to compensate for the increased subject to film distance. This can be computed by using a simple mathematical ratio. Working from standard exposure factors provided by the manufacturer of the x-ray machine (which is based on subject to film

distance of one) you may increase the target to subject distance by one inch for every inch increase in the subject to film distance. Note that the inch increase is in the target to subject distance, not the target to film distance. Though the target to film distance increases it does not do this in a simple ratio of one to one. It should be understood that when taking a lateral view of the foot, some of the bones of the foot will be at a greater distance from the film than others. If the operator wishes to view a bone that lays in the center of the foot, on lateral projection, such as the third cuneiform, he should apply the ratio that I have previously mentioned. This will aid him in better visualizing the bone.

This of course is a simple example. There are others which may warrant careful technique such as taking a film through a cast. The operator may become so absorbed in exposure factors which will afford good penetration of the plaster cast, that he is apt to overlook the fact that the bone in question is removed from the film by the thickness of the cast. As a result a distorted, enlarged and fuzzy image will appear. By applying the target to subject ratio this can be avoided and a sharp image of natural size will result.

Target to Film Relationship

As you no doubt know, the target of an x-ray tube is placed at an angle to the electron stream. This angulation causes the resultant x-ray beam to leave the face of the target in a cone-shaped beam. The apex of this cone is on the face of the target. The base of the cone will then fall on the x-ray film. Theoretically at the base of the cone the individual rays are farther apart than they are at the apex. This might be better understood if we visualize the entire cone-shaped beam as being made up of millions of individual rays. Rays which might represent lines of light. These rays or lines of light are closely packed together at the apex but tend to diverge as we move from this point in the direction of the base. This being the case, then conceivably at the point of greatest divergence spaces would exist between the rays. These would be dark spaces. Naturally, the greater the beam has to travel the greater the degree of divergence and, of course, the greater the width of the dark spaces. This could also mean that if a piece of film were placed far enough away from the x-ray source that it would become exposed in streaks.

When taking a film at a thirty-six inch distance the base of the x-ray beam is larger than a 14-17 film. Actually only a small area in the center of the film will receive the full intense x-ray exposure. As you move from the center of the film the degree of exposure becomes less and less until finally at the edges of the film the exposure of the film is due more to "light streaks" than to the homogeneous beam.

From this we may gather that the best detail and image visualization will occur at the center of the film and will become progressively less distinct as we move toward the periphery. Recognizing this fact and the fact that the angulation of the target is essential for maximum efficiency of the tube, the solution for even exposure over the entire surface of the film must lay with the operator and his accessory equipment.

By carefully positioning the film and the subject so that they lie directly beneath the tube, and then using a localizing cone, the x-ray beam can be confined to the exact area of the film. Too often the operator will carelessly aim the tube in the general direction of the subject, missing the center by inches. This will result in the operator taking a film with the diverging rays and this, of course, will lead to a distorted image. The operator should always be

sure that the target, the subject and the film are in line. We can further insure proper exposure by using a cone over the window of the x-ray tube. The diverging beam is thus confined to a smaller area of divergence. As we have already stated the less the beam spread, the greater the unit area exposure. This then will insure the operator of an even exposure.

Patient Central Ray Relationship

The target of every x-ray tube has a small area in its center which is called the focal spot. This area may vary in size, depending on the type of tube. In some tubes it is 2.4mm in others 4.2mm. This focal spot is the point toward which the electrons converge and from which the electrons emanate. In the exact center of this spot the central ray of the x-ray beam emerges. This central ray is also the most perpendicular of all the emergent rays. It will strike the film at exactly 90 degrees.

Along with all other things mentioned, the part to be x-rayed should lie directly in the path of the central ray. The central ray should not only fall through the center of the part to be x-rayed but also to the exact center of the film. This holds true no matter what the position of the patient. When taking an oblique view the tube may be tilted so that the central ray is perpendicular to the part being examined.

If the operator will take care in seeing to it that the central ray strikes the part to be examined at right angles a good film will result. If a picture is taken without regard for this principle it is entirely possible that the part in question may appear along the edge of the film or in extreme cases it may not be on the film at all. Consider this point, all rays to the right or left of the central ray are diverging rays. They are rays that are angling at a steeper and steeper incline. The angle that they make with the surface of the film when they strike becomes progressively more acute. This means that when the part being x-rayed is struck by one of these rays the image of the part will move in the direction of the angling ray. The distance it moves depends upon the distance the part is removed from the surface of the film. It is also somewhat dependent on the target to film distance. In order to keep the image from moving away from the spot over which the bone in question lies, the rays must come down on the part as near to a right angle as possible. Actually the only image that does not move is that which is created by the central ray. In order to keep the image from moving it is necessary to keep the rays as straight as possible. You can see from this that when the rays are very divergent it can move the image a great distance, theoretically far enough to move it off of the film.

With the information set forth here it should become evident that without care in placement of the patient and in alignment of the tube a good picture cannot result. To sum up it would be wise to remember these three points when preparing to take an x-ray picture:

1. Bring the part to be examined as close to the film as possible.
2. Place the area in question to the exact center of the film.
3. Be sure that the central ray strikes the part at a 90-degree angle.

Summary

Some factors in the use of x-ray have been discussed, particularly production, variables, film and positioning.

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References

Positioning in Radiography by K. C. Clark, Grune & Stratton, 1949.

Roentgenological Technique by L. R. Sante, Edwards Brothers, 7th Revised Ed., 1947.

Modern College Physics by H. E. White, D. Van Nostrand Co. Inc., 1948.

Fundamentals of Radiography, Eastman Kodak Co., 1955.

CLINICALLY SPEAKING

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

SURGICAL INTERVENTION IN A DUPUYTREN'S CONTRACTURE

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This is a case history on a relatively rare condition known as Dupuytren's Contracture. We may define the condition as "A painless, chronic contracture of the hand, marked by thickening of the digital processes and of the palmar fascia, and flexion of the fingers especially of the third and fourth, upon the palm. The disease is of uncertain etiology and affects chiefly adult males."[1] However, the condition is often also referable to the plantar fascia of the foot, where the condition may be painful because of weight bearing on these fibrous nodular formations in the plantar fascia.

These nodular formations are thought to be classed under the heading of Xanthoma Tuberosum. Drs. Richard L. Sutton and Richard L. Sutton, Jr., in their HANDBOOK OF DISEASES OF THE SKIN discuss the topic under this heading in this way—"Xanthoma Tuberosum—the lesions are widely disseminated, and the eruption which is more or less generalized in character, may consist of papules, tubercles, nodules and even tumors, often intermixed with plaques and striae. The sites of predilection are the elbows, hips, and knees although no region is exempt. On the palms and soles the lesions because of their peculiar saffron color, stand out in bold relief. . . . Dupuytren's Contracture, affecting the medial palmar fascia and causing scar like flexion of the fifth finger, is possibly of xanthomatous nature. (Meyerding et al.: SGO 72: 582, 1941)"[2] Of course here again we are comparing a description of a contracture of the palmar surface of the hand to that of the plantar surface of the foot.

The case in question, which brought this condition forward, became evident at the Fort Polk Army Hospital in Louisiana. Sergeant First Class O. M. appeared in the Orthopedic Clinic on 6 November, 1956, with enlarged nodular formations visibly evident on both feet. The left foot disclosed three easily palpable masses, firmly fixed to the fascial structure beneath, located on the middle medial expansion of the plantar fascia, the right foot displayed only one nodule immediately behind the first metatarsal head.

The patient, age 37, gave the following history: He first noticed these nodules in 1943, at the age of 23, one year after coming into the Army. However, there was no pain connected with the condition until 1950. The type of pain experienced was that of a sharp pulling like sensation. Obvious conclusion was that the man had changed from a sedentary occupation to a vigorous locomotive occupation and the additional trauma would be an important factor, since no history of gross trauma could be initiated. However, the patient's job before entering the Service was that of Electrical Lineman and upon entrance into the Army he assumed a similar position, therefore no concrete conclusion could be drawn, though he himself lays the blame of the condition upon the change in the type of boots he was accustomed to, and the type he now had to wear. Further investigation, though, brought forth the possibility of a hereditary influence being a part of the etiology, since the same type of nodular lumps were noted on the patient's grandfather many years before, only in the case of the grandfather they conformed more to

the definition of the condition in that they involved the palmar surface of the right hand.

Further evaluation of the past history relevant to the case was the type of treatment previously administered, which resulted in a discussion of two previous operations, one in 1953 and one in 1954, both on the left foot, since the nodular condition of the right foot did not occur until 1956.

Usually surgical intervention in this condition is contraindicated because of the close association with surgical intervention and the predilection toward malignancy. Soft appliances may be used or the administration of Vitamin E, "Vitamin E, of which wheat germ oil is a rich source. . . . Anderson in discussion pointed out its influence on fat metabolism and collagen and indicated its possible utility in poikilodermia, arthritis, Dupuytren's Contracture and knuckle pads."[3] In the case of Sergeant First Class O. M., however, it was felt that the previous attempts at surgical intervention were the cause of increased fibrosis and the possible causative factors in increased sensitivity to the area, and therefore a last surgical attempt was planned for permanent eradication of the condition, which now was increasing in size.

The patient was scheduled for surgery on 27 November, 1956, after careful examination of laboratory workup. The laboratory results were as follows:

Blood procedures: WBC—11,250. Hemoglobin—15.6 gm. Bleeding time—1 minute. Coagulation time—3 minutes, 30 seconds.

Urinalysis Report: Color—yellow and clear. Reaction—Acid. Specific gravity —1.015. Albumin—Negative. Sugar—Negative.

The following is a description of the surgical procedure carried out.

The patient was given a general anesthetic in the form of a combination of nitrous oxide, oxygen and Sodium Pentothal, a pneumatic cuff tourniquet was applied to the upper left thigh. A medial curved incision about four inches long was made on the medial aspect of the left foot, running approximately from the naviculocuneiform region to just behind the head of the first metatarsal, in an arc like line, with the apex dorsal. The incision was carried through to the superficial and deep fascia. Skin flaps were dissected in an upward and downward direction.

Upon retraction of the edges, considerable scar tissue was encountered in the plantar surface of the foot, most markedly observed in the old operative sites. Instead of only three nodules which had been palpable in examination, numerous white glistening nodular structures were noted in the plantar fascia, extending as far over as into the middle segment of the plantar fascia, immediately behind the second and third metatarsal heads. The fibrotic nodules on the non-weight bearing portion were excised by sharp dissection and with difficulty from the plantar fascia and surrounding skin, with care taken not to penetrate the skin because of its close proximity to the lesions. A portion of the non-weight bearing plantar fascia unfortunately was also involved in a fibrosis and was excised. The tourniquet was released following this procedure.

Considerable difficulty was encountered in controlling the bleeding, especially in the region of the second common digital branch of the medial plantar artery, however, the bleeding was ultimately controlled by the use of cautery. The skin flaps were then closed with interrupted wire sutures. A pressure gauze dressing was applied with a posterior plaster splint. Postoperative condition was good.

The specimens of the nodular eruptions of the plantar fascia as well as the samples of the fibrotic scar tissue left from previous operative procedures were sent to the labo-

ratory for analysis. Observable features of these specimens centered about their color which was pearly white, and the fact that they were indurated to the touch. The following is the histological interpretation of the tissues dissected from the lesion and sent for evaluation.

"GROSS: The specimen is submitted as plantar fascia and consists of approximately 4 cc's of light yellow to light grey fibrous tissue in multiple fragments. The largest measuring 2.1x1.3x0.8 cms., while the smallest measures up to 3 cms. Grossly no remarkable features are noted. The tissue resembles fibrous and adipose tissue. Representative tissue is taken for microscopic study.

"MICROSCOPIC: Section of grossly described tissue reveals plantar fibromatosis. The fascia tissue contains within it poorly circumscribed areas of spindle shaped cells proliferation. The fibrous tissue proliferation shows cells of rather uniform characteristics with little variation in size, shape, or staining characteristics. Occasional mitotic figures are seen. An inflammatory exudation is not seen. The lesion is rather cellular, however, no malignancy is identified.

"DIAGNOSIS: Soft tissue, left foot, plantar region: Plantar fibromatosis (Pseudotumor of Dupuytren's Contracture)."[4]

The above discussed specimen was then sent on to another installation for further examination and evaluation, however, the provisional diagnosis of the biological workup, as quoted above, came back confirming the diagnosis of Dupuytren's Contracture.

In summation, this paper should not be considered by the reader as an attempt to prove or disprove a surgical mode of treatment for this condition. It is only offered in the form of a case report in the hope of enlightenment for those who may come in contact with a similar condition sometime in their professional career.

U. S. Army Hospital

References

1. BLAKISTON'S NEW GOULD MEDICAL DICTIONARY. Ed., Harold Wellington Jones, M.D.; Normand L. Hoerr, M.D.; Aurthur Asol, Ph.D. Blakiston Pub. Co., Philadelphia & Toronto; pp. 242.
2. HANDBOOK OF DISEASES OF THE SKIN. By Richard L. Sutton, M.D., and Richard L. Sutton, Jr., M.D.; C. V. Mosby Pub. Co., St. Louis; 1949; pp. 385.
3. Ibid. p. 442.
4. Excerpts from laboratory report — specimen number 1315-56. Frank M. Hirose, Capt., M.C.; USAH, Fort Polk, Louisiana; 27 November 1956.

ATHLETIC PEDAL CONDITIONS

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THE large number of traumatic foot conditions existing in today's civilization can be traced to various fields; a large portion of which is found in industry. One of the great sources of these conditions, however, is seen day in and day out on the athletic fields and gymnasia throughout the world. Much of the population has at one time or another suffered slight trauma from such activities as running, jumping, twisting and various other necessary movements that are routine with the well-trained college or professional athlete.

Studies made by the author in the athletic departments at the University of Southern California and Yale University have shown the necessity for proper foot balance to prevent the common injuries that occur in athletic competition. These studies have been made with the cooperation of the coaching staffs of these universities. As of now, data have been compiled on the varsity football players and their response to the new "molded insole therapy."[1]

Besides the prophylactic aspect of this type of therapy, indications for their use are such conditions as: 1, Plantar metatarsalgia; 2, Plantar fascial strain; 3, Traumatic arthritis; 4, Rheumatoid arthritis; 5, Contracted toes; 6, Morton's neuralgia; 7, Bursitis of metatarsal phalangeal joints.

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Work on the impression insole done by George O. Shecter, D.S.C., and the Hirsch Laboratories of Los Angeles, California, has improved upon the static principle of foot imbalance which had previously been described by Levy, Murray, Tax, Rosoff and others. These static principles employed the casting of the foot, at rest or semi-weight bearing. These procedures are at present used universally.

The "impression" insole, which molds itself to the wearer's foot dynamically, has the advantages described by Shecter of "1. shaping to the contour of the foot, building a toe rest, filing in the longitudinal arches and forming a heel cup; 2. providing adequate support and acting as a partial shock absorber; 3. encouraging normal toe and foot functions by aiding in the kinetic action of the foot; 4. permitting corrections and additions; and 5. outlining pressure points and plantar excrescences."

A typical case history is of a football player, age 19, with an extremely painful joint at the medial plantar anterior aspect of the first toe, accompanied by swelling and redness. The condition was diagnosed as a chronic bursitis of the first metatarsal phalangeal plantar and third metatarsal phalangeal plantar bilateral. The strain of football activity was considered as the eliciting etiological factor. The problem presented a typical picture of direct trauma due to a torsion function within the football shoe. This necessitated a stabilizing factor to be built within the shoe. This stabilizing factor had to meet the rigid requirements of a constant weight shift and to hold up under the basic kinetics of a football player in action. This need seemed to be best alleviated by the dynamic mold that was to be found in the impression insole of the "Auto-dynamic" type[1] which is a new self-molding inlay that in addition has the stabilizing factor of solid heel cup to make a combination foot mold.

In addition to the advantages described above, there is the distinct advantage of accommodation fit to the football or other athletic shoe (this is a distinct necessity as well as an advantage in the track shoe) that may not otherwise conform. There is the other advantage of the light weight factor since in running, heavy shoes put an athlete at a distinct disadvantage.

The results of therapy employed were: 1. Complete alleviation of symptoms; 2. Better gripping action of toes; 3. Increased speed and acceleration in the games; 4. A cushioned feeling (prevention of cleats from causing pressure points plantarly); 5. Light weight and resiliency.

The above results have been found to be the most advantageous in athletic pedal conditions. Further work on other sports and forms of activity are presently in progress and thoughts are that each activity will bring to light additional need for further proper foot balance therapy.

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References

1. Hirsch Laboratories of Los Angeles, Calif.
2. Shecter, George O., D.S.C.: A "New" Self-Conforming Self-Molding Inlay (Impression Insole), J.N.A.C., May 1956.

To grow and to know what one is growing towards . . . that is the source of all strength and confidence in life.

James Baillie

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PRESIDENT'S MESSAGE

Keep the N.A.C. Productive

In the past two years the N.A.C. has been forced to develop a new plan of operation. An Executive Council has been created to interpret the wishes of the membership into policy, and to extend plans of action to our enlarged Headquarters Staff for accomplishment. There is much concrete evidence that this production system is being successful. A definite statement of chiropody policy has been formulated and is being disseminated. The extension of our interests with the Federal Government has brought prestige and recognition to our profession. Pursuit of and inclusion in group insurance contracts has meant added income for many of our members. The production of a new format and more informative N.A.C. Journal has been a source of pride for every member. The improvement in our National Convention has met with favor, especially the Hall of Science. New features this year will be even more attractive and a record attendance is anticipated. Our membership has been informed of the inside workings of our entire administration through the pages of the Journal, Bulletins, and Newsletters. A list with every detail of our current projects is too lengthy to include in this message.

In creating this advancement program a considerable amount of funds have been expended. When the House of Delegates altered the Constitution and By-laws two years ago to create the Executive Council and the Business Administrator post, no provision was made to underwrite the costs involved. In the past year, costs of publishing the Journal have risen because of increased production and paper costs, over and above the new size costs. This impost was unexpected. Every effort is being made to increase our income through our standard sources; by obtaining more Journal advertising, Directory advertising, and Convention exhibitors. However, we will maintain their charges in keeping with standard rate and data schedules. It is obvious that additional revenue must be secured to continue to keep our operation productive.

I have spoken with chiropodists all over the country about our revitalized organization and have asked if the program and publication they are now re-

ceiving are worth more to them. The answer has been overwhelmingly in the affirmative. Some of the larger states are committed to strenuous budgets, but they indicate that greater support will be accorded to the National Association. Although some states have become self-sufficient within their own area they realize that the real strength of the profession lies in the National Association building up weaker states and carrying on an aggressive program on a national scale. A limited number of chiropodists wish to return to the conservative program of yesteryear.

Almost every chiropodist contributes a substantial sum to charity and his religious institution each year. Likewise, helping the growth of a profession that is dedicated to the relief of the suffering public carries a lofty purpose. We must be generous in our offering.

Our annual dues are nominal and the total budget of the N.A.C. is too low. It is absurd to think that our dues can be maintained at the level of ten years ago if we expect to move forward.

It pays to have a progressive Association and we must be willing to pay for the presently improved privileges.

FELTON O. GAMBLE, D.S.C., *President*

WHAT MAY A CHIROPODIST DO?

At the 1956 House of Delegates, the National Association of Chiropodists adopted the following statement:

> Chiropody-Podiatry is that specialty of medical practice which includes the diagnosis and/or the medical, surgical, mechanical, physical and adjunctive treatment of the diseases, injuries and defects of the human foot.

This may have stimulated some re-evaluation of state practice acts. Perhaps, for this reason during the past year on several occasions, your Secretary and Editor has been asked to make a list of all that a chiropodist is qualified to do. This is not practically feasible except in the most general terms, and any such list could never be complete because of new information constantly being learned.

It is generally conceded that we are qualified to treat arch problems of the foot, yet in essence we are not treating an arch problem, we are treating any, or many, of several forms of arthritis, synovitis, fascitis, myositis, fibrositis, osteochondritis and a host of other tissue problems. Burning in the forefoot may be a neuropathy of metabolic, peripheral vascular or neurologic origin, or perhaps it is strictly mechanical.

The same difficulty would be true of an attempt to make a list of therapeutic modalities. For instance, a list made several years ago could not have included ultrasonics, antibiotics, or some of the corticosteroids. Obviously, trying to make a list which would incorporate every likely treatment of every conceivable condition of every possible tissue of every particular part of the foot is practically an insurmountable task.

By formal education and subsequent training and experience, chiropodists

are qualified to diagnose and treat by any but not exclusively, physical, medical and surgical means, diseases, injuries and defects of the human foot and adjunctive tissues. A distinction has to be made between what the profession is qualified to do and what an individual might himself feel qualified to do. The legal right to do a certain procedure does not confer the moral right to perform something the individual is not qualified to do. For example, a doctor of medicine is legally qualified to do brain surgery, thoracic surgery, etc., but even a highly competent one would refer work of this kind to specialists in those areas. In fact, the more competent he is, the more likely he is to refer it. Unnecessary restrictions placed upon the chiropody profession might result in a few men practicing illegal medicine. A chiropodist performing the procedure he is legally qualified to do but is personally incompetent, is confronted with the more serious problem of malpractice. Self-imposed discipline is implicit in any self-respecting profession and practitioner.

The major objective of any chiropody law is to insure that people of that commonwealth receive the best possible foot care and treatment. This being the case, it becomes a public charge for all of us in both the medical and chiropody professions to insure that this occurs. This is being recognized in more and more states. Presently most of them permit the chiropodist to use any and all medical, physical and surgical means. Only some states have some proscription against the use of certain drugs other than general anesthetics. And seven of these proscriptions are only for barbiturates and/or narcotics.

Taking a lesson from the Abraham Flexner report, *Medical Education in the United States and Canada* published by the Carnegie Foundation for the Advancement of Teaching in 1910, and the William J. Gies report on *Dental Education in the United States and Canada* published by the Carnegie Foundation for the Advancement of Teaching in 1926, our own Council on Education many years ago set up criteria for accreditation and improvement of the physical plants, faculties and curricula of our colleges. This is a continuing process resulting in the present broad base of our education and provides for constant self-evaluation and improvement of our institutions.

Early in the century, medicine consisted of several schools of thought, such as the eclectic, homeopathic and allopathic. It was only after the First World War that allopathy and homeopathy merged. As medicine has demonstrated, proper care of the human body cannot permit the exclusion of any set of principles that would tend to improve that care. The human foot is a part of the human body and cannot be considered as a separate entity, but must be treated as a part of the whole. A foot with a problem cannot be divorced, for purposes of treatment, from the body. This concept of the chiropodist's function enables him to make the necessary decisions for referral, within his own and to other professions, easier, earlier and oftener, by enabling him to recognize his own incompetence in certain areas.

One of the most characteristic attributes of a professional person is the ability to form judgments based on technical knowledge and skill. Limiting this right to exercise proper judgment can only result in forcing the individual into pathways inimicable with the best interest of his patient and his community.

HALL OF SCIENCE
N.A.C. ANNUAL MEETING, AUGUST, 1957
SCIENCE MOTION PICTURE THEATRE

1. Medical Witness
2. Doctor Defendant
3. Unconditional Surrender "Polio"
4. Tryptar-Physiologic Debridement
5. Skin Grafting of Burns
6. Rheumatoid Disorders
7. Aureomycin, The Versatile Antibiotic
8. Enzyme Therapy with Varidase
9. Clinical Manifestations of Gout
10. Antibiotics and Terramycin
11. The Story Behind your Doctor's Prescription
12. The Treatment of Varicose Veins
13. Amputation Prostheses of the Lower Extremity
14. Trench Foot
15. Movements of Joints and Restoration of Lost Mobility
16. An Introduction to Fractures
17. Posture and Exercise
18. Muscles
19. Shoe Making
20. A Documentary on Geriatrics

SCIENTIFIC EXHIBITS

The Committee has been advised of the following exhibits and hears that still more are in preparation and will be exhibited at the annual meeting.

1. Marvin Steinberg—for the Podiatry Society of New York
2. Herman Siegler—for the Podiatry Society of New York
3. Harold Brooks—American College of Foot Surgeons
4. Samuel Brezak—(a) Mosaic Warts
   (b) Chiropody Clinics in New York
   (c) A Chiropody Clinic in Operation in a Hospital
5. Peter Varzos—American College of Foot Orthopedics
6. MacKinley Trent—Illinois College of Chiropody—Orthopedics
7. Fred Mazzaglia—Illinois College of Chiropody—Surgery
8. Lola Reisgraf—A. M. A. Exhibits (2)
9. Charles Krausz—Historical Books and Journal exhibits
10. Marvin Shapiro—Two Visual Education Exhibits
11. Milton Lewis—American Society of Chiropodical Roentgenologists

X-RAY REFRESHER COURSE

By American Society of Chiropodical Roentgenologists. This will be given from 8:00—10:00 A.M., Monday, August 19th and Tuesday, August 20th at the 1957 N. A. C. Annual Meeting.

Monday, August 19th,

8:00 A.M.—Basic Factors on Proper Positioning for the Lower Extremity, Joseph W. Glidden, D. S. C., FASCR, Fairfield, Conn.

8:45 A.M.—The X-Ray in Compensation Practice, Joseph W. Healy, D. S. C., FASCR, Westfield, Mass.

9:15 A.M.—Physiologic and Pathologic Alterations in Bone, Irving Yale, D. S. C., FASCR, Ansonia, Conn.

Tuesday, August 20th,

8:00 A.M.—Loss of Bone Substance—Roentgen Interpretation, James E. Bates, D. S. C., FASCR, Philadelphia, Pa.

9:00 A.M.—Posture Pelvic Studies in Relation to the Foot and Short Leg Syndrome, Milton R. Lewis, D. S. C., FASCR, Chicago, Ill.

M. J. Lewi, M.D.

"The evil that men do lives after them;
The good is oft interred with their bones."

Here is a man who reverses the famous quotation: his good deeds will live after him. Our hero is gone! "The father of Scientific Chiropody," our own beloved Doctor Maurice J. Lewi—friend, counselor, physician, educator—is no longer with us.

The faculty and student body of The New York College of Podiatry have been deeply saddened by the passing of our esteemed mentor.

In addition to expressing profound sympathy, we also wish to record our heartfelt thanks for the many pleasant years of association. Doctor Lewi will ever live in our hearts and memories. Throughout his life, Doctor Lewi has consistently exemplified all that is noble and honorable.

The best tribute which the profession of Podiatry-Chiropody has to offer, at this sad moment, is that the doctor personified the proof of his favorite aphorism as a heritage to all of us: "You cannot make footprints on the sands of time sitting down."

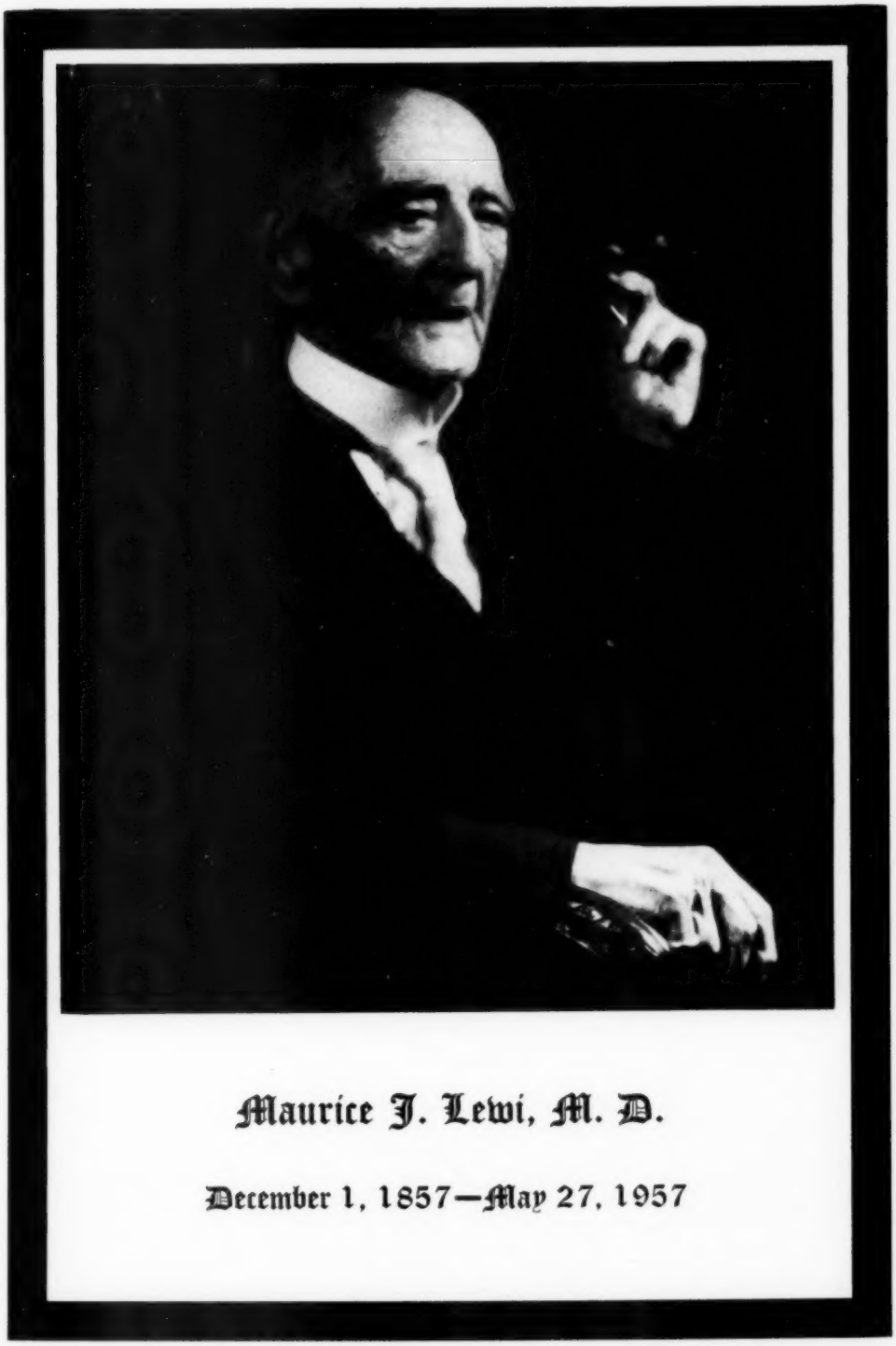
The Profession, both in America and abroad, will long lament the loss of this distinguished servant, who served the profession since 1912. May his soul rest in peace.

M. Jay Chanin, Pod. D.
Librarian
New York College of Podiatry

Dr. M. J. Lewi, President of the New York College of Podiatry, passed away on May 27, 1957. He was born on December 1, 1857, in Albany, N. Y. At the time of his death he was probably the oldest practicing educator in the United States. He was a graduate of the Albany Medical College, and in 1891 became the first secretary of the New York Board of Medical Examiners. He resigned this position in 1913 to become the President of the New York School of Chiropody. During his lifetime he edited a number of books for the profession including "Textbook of Chiropody," "Surgery with Special Reference to Podiatry," "Foot Orthopedics," and "Modern Foot Therapy." He was the recipient of many honors during his long active career which included an honorary Doctor of Surgical Chiropody degree from the Illinois College of Chiropody and held honorary membership in the National Association of Chiropodists, Podiatry Society of New York, Chiropody Society of Pennsylvania, Chiropody Society of New Jersey, and the Massachusetts Association of Chiropodists.

He was also a member of the New York Academy of Medicine, Bridge and Whist Club of New York, Albany Society, and the Wadsworth Lodge, A. F. and A. M. He is survived by a daughter, Mrs. Leo Herz, a sister, Miss Alice Lewi, three grandchildren and six great grandchildren.

C. E. Krausz, D.S.C.



Maurice J. Lewi, M. D.

December 1, 1857—May 27, 1957

Congress Considers

Congress has now been in session five months. During that time it has accepted more than ten thousand bills and they continue to come in at the rate of two to three hundred a week. The number has reached 2,257 in the Senate and 8,050 in the House.

The Bills in which we are particularly interested, H.R. 6874 and S.1917, have not as yet been scheduled for hearing by the respective committees. However, I am advised that the Chairman of the House Committee expects to reach the bills before adjournment. One of the House Leaders, in response to a question the other day, remarked that Congress may not adjourn until the middle of August.

At the present time the House is debating the "hot" question of civil rights and finishing its work with regard to the budget. In the interim, it spends time discussing water power and atomic energy. The Senate is devoting its time to the budget and, by the way, it is not living up to its reputation of previous years of restoring the cuts that are made by the House. This year the Senate has made some restorations, but it has also increased some of the House cuts. It is principally engaged in discussing subjects relative to foreign aid at this writing.

Among the subjects that have been considered, and in part remain on the calendar for further discussion, is American Indian Welfare, which embodies an appropriation of funds for education and medical care, including the construction of hospitals. The Foreign Aid Program has figured prominently in the discussion in both houses.

Health Information Foundation Report

The Health Information Foundation reports the effectiveness of voluntary health insurance coverage among insured groups in two cities; Boston, Mass. and Birmingham, Ala. The Blue Cross, the Blue Shield and Aetna Life Insurance Company contributed the information.

The survey was conducted to bring new data to the voluntary health insurance field which has grown from twelve million subscribers and policy holders seventeen years ago to one hundred and twelve million today. Seventy percent of these persons are members of insured groups. One of the objectives was to study the financial impact of services not usually covered for such groups by present health insurance such as physicians' home and office calls. About seventy-five percent of the hospital charges are covered by insurance and an average of sixty-two percent of all surgical charges. Among the families incurring hospital charges, an average of sixty-one percent had eighty percent or more of those charges paid by insurance during the survey year.

The survey further showed that frequently families have expenses for uninsured services which are too high in the aggregate to be called "out-of-pocket" items. The survey shows to what extent certain benefit provisions need to be expanded and others provided for in further assisting people to meet their unexpected health expenses. It indicates that if it is reasonable to expect insurance to cover eighty percent of all charges for hospital care, nationwide upgrading of benefits would be needed among forty-one percent of the families now holding hospital insurance.

O.A.S.I.

The Old Age Survivors Insurance Benefit (O.A.S.I.) recently enrolled its ten millionth person for Federal Social Security payments, Secretary Folsom, H.E.W., has announced. A breakdown of these ten million people shows that 7,420,000 are retired workers and dependents and 2,580,000 are survivors of insured workers. Persons sixty-two and over who are now receiving bene-

fits, number 8.3 million and 1.4 million children are receiving monthly benefits.

The average benefit now being paid to retired workers with no dependents is $61.00; for a man age 65 and over and his wife, the couple's average is $106.00. Beginning July 1st, persons who are permanently and totally disabled and eligible for social security benefits may apply and, if accepted, receive benefits equal to those that normally are paid to persons who reach the age 65.

Hospital Loan

The Senate Banking and Currency Committee has voted to earmark $25,000,000 of an increased loan authority under the Federal Housing Administration so hospitals can borrow money to build living quarters for student nurses and internes. Under the proposed amendment, hospitals with state approved educational programs for nurses and internes may borrow money at 2⅞% with repayment over as much as forty years.

Such loans have been available since 1950 for colleges but not for hospitals. Some hospitals prefer their government assistance to come in the nature of loans rather than grants.

Defense Department Medical Program

Twenty additional medical schools have applied to participate in the Medical Education for National Defense Program. According to Assistant Defense Secretary Frank Berry, ten schools will be picked from among the twenty, bringing to forty-five the number of schools participating.

At a press conference, Dr. Berry announced a decrease in the number of resignations from medical branches of the armed services. He attributed this to the passage last year of the Career Incentive Act which provides for additional pay for doctors serving beyond two years and also gives them additional credit toward promotions and retirement.

There are enough physicians now commissioned or committed to service to take care of the military's needs for the next fiscal year without having to draft any doctors.

Jenkins-Keogh Bill

Representative Thomas Jenkins (R. Ohio), one of the sponsors of the Jenkins-Keogh Bill, announced that members of the House and Senate are receiving thousands of messages, urging enactment of his bill. Mr. Jenkins declares: "I am sure that practically all members have been receiving messages of some kind with reference to the Jenkins-Keogh Bill. Yesterday I received three hundred telegrams in favor of this Bill. These telegrams were signed by doctors, lawyers and influential businessmen." The legislation is being supported by the American Thrift Association for ten million self-employed which is acting in behalf of the American Medical Association, National Association of Chiropodists and a number of other national associations representing the self-employed.

The Bill would allow the self-employed to put up to 10% of their income per year (maximum of $5,000) into restricted annuity programs or insurance without paying income tax on the amount; to receive the money back in the form of pension payments, generally after age 65 and at that time pay income tax on it.

Research in Medical Schools

The National Science Foundation reports that in the year of 1953-54, medical schools in the U. S. spent about as much money on research as for instructional purposes. Seventy-four schools were surveyed; 40 private and 34 public. Between 1941 and 1954 Federal support of medical school research increased from less than one million to 22.8 million dollars.

Federal research assistance came from the following sources: H.E.W. $14 million; the Army $3.6 million; Navy $1.3 million; Air Force $1 million; Atomic Energy Commission $2.1 million, and $317 million from other agencies.

W.H.O.

The W.H.O. Assembly has accepted the invitation to hold its sessions next year in the United States. The city of the meeting has not as yet been announced. Invitations are being considered from a number of cities.

Dr. George W. Calver Elected

Dr. George W. Calver, official physician to Congress, is the new President-elect of the American College of Cardiology and will take over as President next year.

Have You Written?

An editorial from the Schenectady Gazette, Schenectady, N. Y.

"If you're like a lot of people you will offer one or more excuses for not having written to your congressmen. Here are some of the reasons given:

"I was never any good at putting my thoughts on paper."

You don't have to be a "writer." Your congressman wants to hear from you in the simple words that you would use if you met him on the street.

"I don't have the time."

You must be joking.

"I'm no big shot. Why would my congressman pay any attention to one individual like me?"

You'd be surprised. It doesn't require an awful lot of letters from individuals to convince a congressman that what he's getting are the true sentiments of the folks back home.

"I've already sent a form letter which I obtained from an organization I belong to."

You wasted the postage. Your congressman can spot a form letter a mile away.

"I've already sent a letter outlining the position taken on the budget by the organization to which I belong."

That probably didn't impress the congressman very much, either, for he probably knew all along how your organization formally or ostensibly felt about the problem. Your letter didn't give him YOUR OWN idea on the subject.

"From all the talk about the budget, I'm sure our congressmen know how we people feel about it."

Does he know how YOU feel about it? Remember, if he doesn't hear from you and others like you he's going to take the easiest way. Why shouldn't he? Wouldn't you, if you were in his position?

"I don't really care much, one way or the other."

Congratulations. You are a scientific marvel, for you are able to live in a complete vacuum.

Have you written lately?

All it takes is a few minutes of your time, a pencil, piece of paper, envelope and a three-cent stamp.

Responsibility is like a string we can only see the middle of. Both ends are out of sight.

Wm. McFee

THE CHIROPODIST'S CONTRIBUTION TO A MODERN HOSPITAL*

HOWARD JOHNSON, D.S.C.**
JEANE L. JOHNSON, D.S.C.
Enid, Oklahoma

We appreciate this opportunity to discuss with you, informally, some of the foot problems seen by the modern chiropodist. As you know, chiropody is the science and art dealing with prevention and management of diseases of the feet by physical, medical and surgical means. The educational requirements of a chiropodist closely parallel those of medicine and dentistry. Specialization is the order of the day. Even in the specialty of chiropody we find specialization in the form of podopediatrics, dermatology, surgery, peripheral vascular diseases, orthopedics, geripodics, etc. In the smaller communities, however, we must practice general chiropody embracing all branches of the tree of our specialty.

The modern chiropodist fills a definite need in medical care and is well fitted to assume the responsibilities of caring for the nation's feet. Chiropody makes no claims that it *alone* can furnish the ultimate and complete answer to all "foot ailments." Charles Mayo put the problem concisely in these words:

"I am convinced that doctors of medicine, myself included, have paid too little attention to the feet in their relationship to the condition of the patient and have made too cursory an examination of the feet, considering their importance to people with the beating they take and their potentiality as a source of comfort and discomfort. The doctor of medicine should be capable of recognizing foot ailments. When care and treatment of such conditions are necessary, he should refer the patient to those accredited and skilled in that specialty when such consultation is available."

Time does not permit us to go into detail on many phases of chiropody. We must have some gaps in order to present something worthwhile. At this time, Dr. Jeane will present some material on diseases of the nails, dermatology and podopediatrics.

Thank you, Dr. Howard, and may it be added that it is indeed a pleasure to be with you this evening to give you some information about conditions we see in a modern chiropody office. I would like also to take this opportunity to say it has indeed been a pleasure to work with you, the staff of Enid Memorial Hospital. It has been a gratifying and rewarding experience.

Diseases of the Nails

The first section of my presentation will deal with "Diseases of the Nails." As you know, the nails of the hands and feet can be affected by local and systemic diseases and are an important aid in diagnosis of many conditions.

(Eight slides of nails were presented with the following comments):

Slide No. 1 is a good example of onychogryphosis or rams horn nails. This is a neglected club nail and is seen quite often in older people. The causes of such nails are many and varied. Trauma to the nail matrix is one main cause. In slide No. 2 we see another case of onychogryphosis. Neglect is the main reason for such nails. Slide No. 3 exhibits multiple onychauxis or club nails. As you will note, this patient is also suffering from a circulatory problem. Notice the cyanosis. With arteriosclerosis obliterans it is almost imperative that this patient have professional care for these nails. One minor opening in the skin could

*Presented to the active medical staff, Enid Memorial Hospital, January 14, 1957.
**Member of active medical staff.

lead to severe infection and possible amputation. Slide No. 4 shows a hand with hippocratic nails. His toenails exhibited the same "drumstick" appearance. This change is usually due to some systemic disorder. In slide No. 5, please note the double spiral of the nail on the second toe. The nail is growing dorsally and in a spiral. This condition is usually very easily relieved but most patients are afraid to have it treated. They believe that the nail is so painful and looks so terrible that the palliative treatment of the nail would be very painful. This is obviously wrong. These club nails can be painlessly treated. Note the corn under the nail. In slide No. 6 we have onychia, paronychia, incurvated nails and onychocryptosis. You will recognize this as the end result of "Bathroom Surgery," by the patient. Slide No. 7 shows an old fungus nail. This shows the upward displacement of the nail due to fungus debris. This nail condition is often confused with psoriasis and eczema of the nails. Culturing on Sabouraud's media will rule out or confirm the diagnosis. Slide No. 8, the involuted or incurvated nails. Notice the plane of the nail. The lateral edges dip deeply into the soft tissue. Due to this undue pressure of the nail against the soft tissue we find calloused nail grooves or even heloma under the nail, which may be very painful. The only permanent relief for this type nail is a surgical approach to remove the pressure of the nail against the soft tissues.

Dermatology

The next set of slides will depict some dermatological lesions found commonly on the feet. In dermatology of the foot, we *must* follow a specific plan for diagnosis.

(1) Objective Analysis: (a) Morphology: primary and secondary lesions. (b) The distribution of lesions. Contact dermatitis, location usually on toes and instep, not between toes unless secondarily infected. (c) Consideration of the patient as a person, not just a pair of feet. (2) Subjective Analysis: (a) Complete history from patient; associated symptoms; itches, burns, stings, etc. (3) Laboratory Analysis: (a) Complete blood work up. Serological tests, smears, patch tests, urine tests, special tests and biopsy.

We must remember that 90% of skin manifestations come from without the skin. The lay public and many members of the medical professions assume that every skin condition on the foot is a case of so-called "athlete's foot." But with the following slides I hope to show you this is not true.

(Eleven slides with comment were then presented):

Slide No. 9, ectodermal dysplasia: This condition resembles severe corns and calluses. Slide No. 10, shows stasis dermatitis, a common condition in the post phlebitic patient with varicose veins. This patient must be careful of a secondary infection in this devitalized area. Slide No. 11, dermatitis venenata (Poison Ivy): This is often misdiagnosed as so-called athlete's foot without a complete history from the patient. Slide No. 12, tinea pedis, associated with pustules on the plantar surface of the feet, a secondary infection. Slide No. 13, contact dermatitis: Dorsum of the feet. Patch test showed the patient has a sensitivity to the leather of her shoes. Notice the skin manifestation is not between the toes. Slide No. 14, dermatophytosis: Notice the distribution between the toes. Slide No. 15, mixed infection of tinea pedis and dermatitis venenata. Slide No. 16, diabetic ulcers on the plantar surface of the foot. Commonly seen in severe diabetics. Slide No. 17, overtreatment of diabetic dermatitis: It appears this patient used iodine, which may be a dangerous caustic for diabetics to use. Notice the secondary infection and edema. Slide No. 18, varicose ulcer on the lateral side of the leg. This patient is under treatment with physiotherapy, injections of Acthar and compression dress-

ings. With this treatment we can expect healing within five to six weeks. Slide No. 19, contact dermatitis: Tinea was ruled out by culture on Sabouraud's media and a positive patch test of the lining of his shoes. You will notice this has been overtreated.

Podopediatrics

It must be borne in mind that 75% of children today have some type of foot defect. These defects are either inherited or acquired. The etiology is either muscular, ligamentous or structural in origin. The following slides will help you recognize one of the most common foot conditions in children.

(Slides with comment were then presented):

Slide No. 20 shows the front view of a pair of pronated or weak feet. Notice the distention of the dorsal veins, the lowering of the inner side of the feet and the forefoot abduction. Slide No. 21 shows the rear view of the same feet. Most important diagnostic point is the valgus of the heels and the deviation in the tendo-achillis called a positive Helbing's sign. This is always present in a weakfoot. Slide No. 22 is a weight-bearing lateral X-ray view of these feet. Notice the pivoting forward of the talus. Slide No. 23 is the weight-bearing dorso-plantar X-ray, showing the medial rotation of the talus and forefoot abduction. Slides No. 24, 25 and 26 were placed in to show the results of neglect. This child was born with a talipes equino varus, which was corrected before she started walking. Treatment was started to stabilize these feet but was soon discontinued. Now at the age of 11, we have this picture. The pronation was so severe that stainless steel Whitman braces were needed to forcibly correct the existing deformity. Notice the position of the feet in the Whitman braces. Slides No. 27 and 28 show the structural involvement of the leg. There is a unilateral genu varum. This child exhibited unilateral pronation in conjunction with the bowlegs. The last slide shows complete correction of the bowlegs within one year by stabilizing the feet. This is a good example of the effect of the feet on the whole postural complex of our bodies.

Thank you again for the opportunity to speak to you tonight. At this time, Dr. Howard will discuss the surgical approach to some of the minor foot problems.

Surgical Approach to Nail Deformities

The modern chiropodist is taught that nail surgery is not to be merely observed and used as a starter for the embryo foot surgeon, or by those whose ambitions far exceed their ability and training. The very common ingrown nail is probably one of the hardest conditions to correct in the field of chiropodical surgery. Our past failures bear witness to this.

Indications for the removal of the great toenail are numerous but despite these indications, the procedure has been used altogether too freely in the past by both chiropodists and physicians. Not too long ago promiscuous removal of the nail plate was performed in any condition where the nail plate was uncomfortable or unsightly. This resulted in innumerable patients suffering from subsequent involvements of the nails and they developed the utmost antipathy for any surgical procedure designed to correct nail deformities. In one particular case, an Air Force sergeant, age 23, presented himself for treatment with a history of five previous operations for the removal of a great toenail, and with each subsequent operation the condition had become progressively worse.

Etiology

A comprehensive list of some 47 etiological factors is recognized. Time does not permit their discussion. The usual explanation of incorrect shoes or short hose no longer suffices for most cases.

Classification

Surgically we are not interested in the normal nail plate which occasionally is improperly trimmed and results in an imbedded fishhook or nail spur, but we are concerned with the incurvated nail plate or labial hypertrophy with a normal nail plate. These mentioned types may combine or be accompanied by pyogenic infection, paronychia, etc.

(Slides and comments followed):

Slide No. 1, anatomy and normal appearance of the great toenail plate and labia. Slide No. 2, cross section illustrating plate, bed, cuticle, root, fold, matrix skin, and phalanx. Slide No. 3, 2nd type condition, incurvation with a normal labia. Slide No. 4, 3rd type hypertrophic unguilabia with a normal nail plate. Slide No. 5, combination nail incurvation with hypertrophied labia. Slide No. 6, acute pyogenic infection with hypergranulation. Slide No. 7, massive post-operative granuloma, recurrence of incurvated nail.

Modern surgical correction of the "ingrown nail" may be one of the following types: (1) Excision of the lip, Du Vries.[1, 2] (2) A piece of the nail and its subadjacant matrix is excised, Winograd.[7] (3) A combination of the above procedures, Hertzler.[4] (4) Complete avulsion of the nail plate with resection of the nail root and bed, Frost[3] and Kaplan.[5]

Root Resection for Incurvated Nail

Up until five years ago we tried practically all the techniques described in the literature, and for a period of twenty years we found that about one half of the so-called ingrown nails we operated, recurred. It is our purpose to detail a technique developed by Fellows of the American College of Foot Surgeons, known to us as the Frost Technic[3] in which thousands of selected cases of nail operations when properly and skillfully done have had no recurrence. Please note selected cases. *(Slides No. 8, 9, and 10 all illustrations describing the Frost Technic.)*

Surgical Approach to Heloma Durum and Heloma Molle

(The three basic types of heloma durum techniques were explained and illustrated with slides.) No. 1, excision of head of the proximal phalanx, Fowler Technic. No. 2, middle phalanx removed, Austin Technic. No. 3, condylectomy of the head or base of the phalanx DuVries Technic. The prognosis in selected cases is very favorable. In combination with the three basic types of heloma durum and heloma molle operations, the foot surgeon may elect to do a web resection, capsulotomy, tendon resection, adhesiotomy, phalangectomy, amputation, etc., for a more favorable result.

For the sake of brevity we will not discuss the etiology of this common foot complaint except to mention the exciting factor of friction and pressure from improper footgear.

Up until the past few years the value of surgical correction of heloma durum had been a much debated question among foot surgeons. Various authors have advocated a variety of operations for this common condition; these techniques have been used by our office with varying degrees of success. Our past failures can be attributed to our failure to determine those cases which are not suitable for operation, operating at random, rather than making a careful selection. Our percentage of failures today runs about ½ of 1 per cent.

(Slides No. 10, 11, 12, 13, 14, 15, and 16 illustrated pre and post operative photographs and X-rays of the Fowler Technic. Slides No. 17, 18, 19, 20, 21, 22, 23, and 24 pre and post operative and technique on bunions neurofibroma and hammer toes.

Verruca or Papilloma Problem

The chiropody profession has no 100% cure for the unusually stubborn type papilloma. This condition has been baffling

dermatologists and chiropodists for years. Our results have been fair with the various forms of cauterization surgery and injections. We have used psychotherapy with some success. The dermatologists report X-ray radiation is about 85% effective. Fifteen to twenty years later skin cancers have been reported as the result of X-ray therapy for the cure of papilloma and tinea pedis.

We could spend the entire evening on the etiology and still not exhaust the subject. In passing, investigators seem to agree there is a filterable virus present. Faulty utilization of vitamin A has been mentioned and experimental research in this direction is underway. *(Slides presented.)* Slide No. 29 is a mosaic papilloma, a hypertrophic papillary lesion with irregular borders, spreading over large areas and very resistant to all forms of therapy. Slide No. 30 is a verruca on the posterior plantar surface of heel on a male, age 72, duration thirty years. Slide No. 31 is previous case postoperatively after an elliptical excision including a portion of the healthy tissue. A massive advantageous bursa was present and removed from the base.

By far the most common skin tumor on the foot is the verruca or wart. The chiropodist treats more of these lesions per capita than any other group of medical practitioners.

We are happy to share with you some of our answers to foot problems.

Bass Building

References

1. DuVries, H. L.: Hypertrophy of the Unguilabia, Chiropody Record, pp. 5-7, January 1934.
2. DuVries, H. L.: Hypertrophy of the Unguilabia, Chiropody Record, pp. 33-35, February 1934.
3. Frost, L.: Root Resection for Incurvated Nail, J.N.A.C., Vol. 40, No. 3, March 1950.
4. Hertzler, A. E., and Chesky, V. E.: Minor Surgery, C. V. Mosley Company, St. Louis, pp. 548-551, 1930.
5. Kaplan, E. G., and Frost, L.: Surgical Course Civic Hospital, Detroit, Mich., Dec. 1956.
6. Mowbray, Douglas T.: Surgical Excision of the Great Toe Nail, The Chiropody Record, Vol. 18, No. 1, January 1935.
7. Winograd, A. M.: A Modification in the Technic of Operation for Ingrown Toe Nail, J.A.M.A., 92, 229, 230, 1929.

Advice from "The Country Housewife's Family Companion"

London, 1750

Cutting and curing corns:

I know a man and his wife who, when they cut their corns to the quick as to make them almost bleed, always rubbed some Spirits of Wine on them, which prevents their festering or bringing on a mortification.

To relieve a traveler's feet let him heat his feet every night before a fire very well and it will draw out the fiery heat which they have contracted by walking in the day—or wash your feet with white wine vinegar at night, or put an egg in each shoe when you walk.

Whitloe Cured:

A person having a whitloe on the top of the toe when it was toward a ripeness, soap mixt with chalk was put to draw it to a head and when it was broke, melilot salve was applied and after that the cure was finished with an old woman's healing salve.

PILOT ECONOMIC SURVEY

Committee on Professional Economics

B. C. EGERTER, D.S.C., Chairman

In July, 1956 questionnaires were sent to the chiropodists practicing in the States of California, Iowa, Pennsylvania, Texas, and the District of Columbia. Each of these questionnaires was accompanied by a letter explaining in detail the purpose of the pilot study and asking for the cooperation of the chiropodist. The members of the Committee on Professional Economics were greatly encouraged by the high percent of returns for this type of study and also by the many who took time to indicate in the section for remarks that they felt there was a need for such a study and made suggestions and helpful comments.

Of the 1635 questionnaires mailed, 514 or 31.4% were returned. Of these, some had to be excluded from the study as they had been returned blank with such notes as "retired," "not in active practice," etc. Five hundred and three, or 30.8% of the original mailing of 1635, were included in the study.

Table I shows the distribution by area of the 503 returned questionnaires.

TABLE I

Questionnaires Returned

Area	Number
District of Columbia	18
Iowa	20
Texas	44
California	185
Pennsylvania	236
Total	503

The median age of those reporting varies from 36 years in Iowa to 40 years in California. However, the size of the sample from Iowa is so small that chance can not be ruled out. The number of reports from Texas and the District of Columbia also are small and, therefore, for the purposes of this report in most instances the figures will be based on the total group. For this total group, the median age is 39 years. The median, or mid point, is the average used in this instance as it is not influenced as greatly by the extreme cases as is the mean, or more familiar arithmetic average. The youngest person reporting was 24 years old and the oldest person included in the study was 79 years old.

Four hundred eighty-seven or 97.0% of the group are males, and 485 or 96.4% of the entire group are white. Four-tenths of one per cent are other races than white. It should be noted here that 3.2% did not complete the question on race, and several made a note that they objected to its being included. As was pointed out in the Supplementary Report given by the Committee at the N.A.C. meeting last August, the Committee members realized that this question would be apt to raise objections but we felt that it was closely related to economics and, therefore, very pertinent to the study. In analyzing some of the data later in the report, only the white males were included so that variables such as race and sex could be eliminated.

One factor which was included in this questionnaire with a thought that a more complete national survey might follow was the chiropody college attended. The Temple University, School of Chiropody, leads the list with 32.8% and the California College of Chiropody follows with 26.6%. However, one should remember that both of the home states, California and Pennsylvania, were included in this pilot survey. (See Appendix, Table A).

The number of years in practice for the entire group is given in Table II:

It is interesting to note that nearly one-third of those included in the study have not been in practice more than five years, and more than half have been in practice ten years or less. This table, coupled with the fact that the median age of the entire group reporting is only thirty-nine years,

shows that this study appears to bear out the fact that chiropody as we know it is a relatively young profession.

TABLE II
Years in Practice

Years	Number	Per Cent
5 or less	154	30.6
6-10 years	113	22.5
11-15 years	29	5.8
16-20 years	81	16.1
21-25 years	65	12.9
26 or more	58	11.5
Not stated	3	0.6
Total	503	100.0

The question regarding N.A.C. membership shows that 84.3% of those answering do belong to the Association while 15.1% do not. The remaining 0.6% did not indicate whether or not they are members. Some of those who said that they were not now members indicated that they had been in previous years or that they intended to join in the future. (See Appendix, Table B for detailed breakdown. Note: We would like to point out again that, statistically, figures for Iowa, Texas and the District of Columbia are so small that by themselves they do not have any significance, and the tables are included for reference only.)

The number of hours per week spent in the office varies from a high of 70 to a low of 20 hours. A few reported that they spend less than 20 hours in the office, but they indicated that it is due to poor health and not their choice. Of the total, 15.3% operate an auxiliary office and spend time there from a low of 2 hours to a high of 32 hours per week. Of the total group, 53.9% indicated that they have evening hours either on a regular schedule or by appointment. It is interesting to note that the two largest groups included differed widely in affirmative replies. In Pennsylvania 83.5% have evening hours while in California only 33.5% reported having evening schedules. (See Appendix, Tables C and D.)

The percentage of those who would make house calls was high and about the same regardless of the geographic location. Of those reporting, 88.7% said that they do make house calls and 53.9% make hospital calls. With hospital calls too, there is little variation from geographic factors. (See Appendix, Tables E and F.)

More than half of those included in the study do not hire any assistant. Of the 43.7% who reported having an assistant, the number varied from part-time help to three full-time assistants. It is interesting to note here that several persons wrote in the remarks that they hire a registered nurse and feel that it is well worth her additional pay as she adds to the office in knowledge, understanding, and ability to handle patients. Only 9.1% reported having any associates and none of these had more than one.

There was interesting variation in the location of office. The largest group, 270 or 53.7% have offices downtown, 120 have offices in a residential section, 76 have offices in a suburban shopping center, 20 have offices in other locations such as "physicians' row," semi-business area, etc., and the additional 17 did not state where their offices are located. Nearly half of the offices, 42.3%, are located in professional buildings, another 29.2% have first floor offices, 9.5% have walk-ups, and 13.9% have their offices in their homes. (See Appendix, Tables G and H.)

In analyzing the figures for annual gross income, only those who are white males were included so that race and sex would be known to have no part in the variations. Studying the following table reveals that the largest single group, 36.8%, reported incomes between five and ten thousand dollars. The next largest group have an average annual income from ten to fifteen thousand dollars, and the next group re-

ported incomes of fifteen to twenty thousand dollars. Only 11.0% reported incomes of five thousand dollars or less; of these 67.3% have been practicing less than 5 years and 91.8% have been practicing less than 10 years.

TABLE III

Annual Gross Income

Gross Income	Number	Per Cent
$5,000 or under	52	11.0
$5,000 to $10,000	173	36.8
$10,000 to $15,000	140	29.7
$15,000 to $20,000	63	13.4
$20,000 or over	41	8.7
Not stated	2	0.4
Total	471*	100.0

*White males only

Of the 503 in the total group, 289 reported average annual income from surgery to be $500 or less. This group represents nearly sixty per cent of the total. The remaining forty per cent is divided among the other groups and more than ten per cent of these did not answer the question. It is possible that some of these who did not answer meant it to indicate that they did not do surgery at all. Regarding mechanical devices, the pattern follows very closely the pattern for surgery. The largest group has the smallest income from devices and with increasing income from these devices, each group gets smaller. (See Appendix, Tables J and K.)

Seventy-five per cent of the total group reported operating expenses of five thousand dollars or less. Nineteen per cent reported expenses of $5,000 to $10,000. (See Appendix, Table L.) The value of equipment ranged from a low of $100 to a high of $12,000.

The questions regarding pharmaceuticals indicate that 8.0% do not write any prescriptions while another 3.2% left the question out. Again this might have been meant to indicate that they too did not do any prescription writing. The largest number reported was 150 prescriptions written per week, and this was a great deal more than the next highest figure. Forty-one per cent reported that they do not dispense prescriptions and an additional 11.7% did not answer. This may indicate that these too do not dispense at all. The highest reported number of pharmaceuticals dispensed per week was 55. One chiropodist reported spending $600 per month on Pharmaceuticals, the next high was $175. These were the exception; most spent much less.

The questions involving the number of treatments and patient load were misunderstood in a large per cent of cases. We asked for the approximate number of treatments given in the last year and also for the approximate number of patients treated during the last year. In such instance the number of treatments should have been larger than the number of patients as many patients would return for additional treatments. However, in many reports the two numbers were given as being identical; therefore, they had to be excluded from the analysis. One chiropodist reported figures which show an average of 9.3 visits per patient during the year and another gave figures of 4,500 treatments and 4,000 patients or an average of 1.1 treatments per patient during the year. Most of those reporting correct figures fell between these two.

Time did not allow for a complete detailed analysis of combined factors such as years in practice, hours per week spent in the office, and gross income. Obviously, these are closely inter-related and should be studied in relationship, each with the others. It is in this type of cross-relationship that the value of such a study is best shown. It is hoped that in the final national survey such items as the number of new patients and hospital affiliation will be included and that it will be a better survey for having had this pilot study to guide it.

APPENDIX

TABLE A
CHIROPODY COLLEGE ATTENDED

College	Number	Percent
Temple University, School of Chiropody	165	32.8
California College of Chiropody	134	26.6
Illinois College of Chiropody & Foot Surgery	75	14.9
Ohio College of Chiropody	70	13.9
Chicago College of Chiropody	31	6.2
New York College of Podiatry	14	2.8
Other	2	0.4
More than one college	6	1.2
None	1	0.2
Not stated	5	1.0
Total	503	100.0

TABLE B
N.A.C. MEMBERSHIP

	Number				Percent			
Area	Total	Yes	No	Not Stated	Total	Yes	No	Not Stated
District of Columbia	18	17	1	0	100.0	94.4	5.6	—
Iowa	20	14	6	0	100.0	70.0	30.0	—
Texas	44	43	1	0	100.0	97.7	2.3	—
California	185	152	32	1	100.0	82.2	17.3	0.5
Pennsylvania	236	198	36	2	100.0	83.9	15.3	0.8
Total	503	424	76	3	100.0	84.3	15.1	0.6

TABLE C
AUXILIARY OFFICE

Area	Total	Yes	No	Not Stated
District of Columbia	18	2	16	0
Iowa	20	0	20	0
Texas	44	4	40	0
California	185	29	151	5
Pennsylvania	236	42	188	6
Total Number	503	77	415	11
Percent	100.0	15.3	82.5	2.2

TABLE D
EVENING HOURS

Area	Total	Yes	No	'Rarely'	Not Stated
District of Columbia	18	3	15	0	0
Iowa	20	6	12	2	0
Texas	44	3	38	3	0
California	185	62	114	9	0
Pennsylvania	236	197	31	6	2
Total Number	503	271	210	20	2
Percent	100.0	53.9	41.7	4.0	0.4

TABLE E
HOUSE CALLS

Area	Total	Yes	No	'Rarely'	Not Stated
District of Columbia	18	13	3	2	0
Iowa	20	20	0	0	0
Texas	44	39	4	1	0
California	185	162	20	3	0
Pennsylvania	236	212	20	4	0
Total Number	503	446	47	10	0
Percent	100.0	88.7	9.3	2.0	–

TABLE F
HOSPITAL CALLS

Area	Total	Yes	No	'Rarely'	Not Stated
District of Columbia	18	7	6	4	1
Iowa	20	12	6	1	1
Texas	44	30	13	0	1
California	185	99	67	10	9
Pennsylvania	236	123	93	10	10
Total Number	503	271	185	25	22
Percent	100.0	53.9	36.8	4.9	4.4

TABLE G
OFFICE–SECTION OF CITY

Section	Number	Percent
Downtown	270	53.7
Residential	120	23.8
Suburban Shopping Center	76	15.1
Other	20	4.0
Not Stated	17	3.4
Total	503	100.0

TABLE H

Building OFFICE–BUILDING	Number	Percent
Professional Building	213	42.4
First Floor	147	29.2
Own Home	70	13.9
Walk-Up	48	9.5
Other	9	1.8
Not Stated	16	3.2
Total	503	100.0

TABLE J
INCOME FROM SURGERY

Income	Number	Percent
$ 500 or Under	289	57.5
$ 500 to $1,000	76	15.1
$1,000 to $3,000	49	9.7
$3,000 to $5,000	15	3.0
$5,000 or over	18	3.6
Not Stated	56	11.1
Total	503	100.0

TABLE K
INCOME FROM MECHANICAL DEVICES

Income	Number	Percent
$ 500 or Under	204	40.5
$ 500 to $1,000	113	22.4
$1,000 to $3,000	107	21.3
$3,000 to $5,000	36	7.2
$5,000 or over	19	3.8
Not Stated	24	4.8
Total	503	100.0

TABLE L
OPERATING EXPENSES

Expenses	Number	Percent
$5,000 or Under	377	74.9
$5,000 to $10,000	96	19.1
$10,000 to $15,000	14	2.8
$15,000 or over	2	0.4
Not Stated	14	2.8
Total	503	100.0

TECHNIQUES IN FOOT SURGERY

L. R. McCAIN, D.S.C., F.A.C.F.S., and N. H. KETAI, D.S.C., F.A.C.F.S.
Editors, Publications Committee, A.C.F.S.

Illustrated case reports and discussions, suggesting approaches to chiropodical surgery, from the files of the American College of Foot Surgeons.

A SURGICAL APPROACH FOR DIGITI QUINTI VARUS

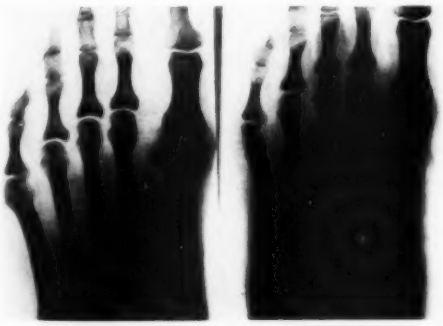
A WHITE WOMAN, aged thirty-five, seen in the office presented a nucleated tyloma over the lateral side of each fifth metatarsal head. The lateral side of the head was very prominent, and the fifth toe was angulated medially.

X-rays indicated a bowing of the fifth metatarsal bone laterally, thereby making the head more prominent.

This patient was a controlled anemic and was approved by her physician for the surgery.

Procedure: Anesthesia to the area was effected by 7 cc. of Novocaine®[1] 2%, with 1:50,000 epinephrine.

A dorsal dermal incision was made extending about five centimeters, over the fifth metatarsal shaft and head, and the base of the proximal phalange of the fifth toe. The edges were underscored by blunt dissection. The tendon of extensor digitorum longus was retracted and approximately a centimeter and one-half of this tendon was removed. A longitudinal incision was then made through the capsule over the fifth metatarsal head, and the capsule carefully retracted. By use of a bone saw, part of the lateral condyle of the fifth metatarsal bone was removed. The lateral side of the head was rasped smooth, being careful to round the dorsal, plantar and anterior aspect. The bursa was dissected free and removed. The capsule was closed with three interrupted 000 chromic catgut sutures. The skin was closed with two interrupted mattress and seven interrupted sutures of 000 silk.



Pre- and postoperative radiographs of digiti quinti varus.

Postoperative treatment was as follows: The day following the surgery the pressure dressing was removed. The second day the entire sterile dressing was removed with the exception of the 2x2's directly over the wound. Sterile dressing reapplied. On the fourth postoperative day Tincture of Merthiolate®[2] was applied and an entire sterile redressing applied. On the seventh day the dermal sutures were removed, postoperative X-rays taken, and a sterile redressing applied. On the tenth day it was redressed. On the fourteenth day the patient was discharged.

The same technic was used on each foot.

M. D. Harris, D.S.C.

Comments:

This is one of the better technics for the so-called Tailor's Bunion. However, in most instances it is not necessary to remove a portion of the extensor digitorum longus tendon to the fifth toe, or do a tenotomy thereon.

Whenever this surgery is done it is always

necessary to insure that the postero-lateral part of the condyle is removed flush with the shaft of the metatarsal. It must be remembered that the shaft of the fifth metatarsal is directed in an antero-lateral direction, and if the lateral condyle is removed in an antero-posterior direction part of the posterior aspect of the lateral condyle will be left.

L. R. M. and N. H. K.

®[1] Winthrop-Stearns.
®[2] Eli Lilly & Company.

A SURGICAL APPROACH FOR REMOVAL OF EXOSTOSIS DORSAL ASPECT OF FIRST METATARSAL HEAD

A white woman, aged thirty-nine, seen in the office presented a tenosynovitis of the extensor hallucis longus tendon of the left foot. This was caused by a sharp exostosis on the dorsal aspect of the head of the first metatarsal bone.

Findings and physical examination not significant.

Procedure: After sterile preoperative procedure, anesthesia was effected by infiltration of four cc. Novocaine®[1] 2%. A Martin bandage was then used as a tourniquet.

A longitudinal incision was made over the first metatarsal joint on its superior lateral aspect. It was five centimeters in length, and was lateral to the extensor hallucis longus tendon. Blunt dissection was used through the subcutaneous tissues to expose the joint capsule. The joint capsule was then incised longitudinally. A small periosteal elevator was used to deliver the metatarsal head through the capsular incision. The hypertrophic bony ridge was amputated from the dorsal aspect of the head of the metatarsal. The bone area was smoothed with a bone rasp, and the metatarsal restored to position. The capsule was then closed with three chromic catgut sutures. The skin was closed with three vertical mattress sutures of 000 dermal material, and two interrupted sutures.

The patient was given Nembutal®[2] 1½ grains at hour of sleep, and Emperin Compound, one every three hours for pain.

Postoperative treatment was as follows: Three days following surgery a complete sterile redressing was made. On the seventh day postoperatively the sutures were removed and sterile redressing made. On the twelfth day postoperatively sterile redressing was made. On the seventeenth day the patient was dismissed.

N. Bianco, D.S.C.

Comments:

This is the usual surgery performed when there is no involvement of the joint, but only a dorsal exostosis of the metatarsal head.

L.R.M. and N.H.K.

®[1] Winthrop-Stearns.
®[2] Abbott Laboratories.

"Two-hundred and fifty Boonsboro High School upperclassmen, ten colleagues and I enjoyed the recent visual presentation here of your most informative, educational, and instructive motion picture, CHIROPODY AS A CAREER.

"The film, in my opinion, represents a definite contribution to the field of occupational guidance. Synchronization of sound and color and subject treatment are excellent." John J. Ferdian, Jr., Chairman N.V.G.A. Audio-visual Guidance Section.

PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.

Chairman, Council on Chiropodical Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. We invite questions, which we shall endeavor to answer, or obtain the answer.

Mycostatin Ointment

Squibb tells us that Mycostatin is the first safe antibiotic active against fungi, and it is derived from cultures of Streptomyces noursei. Mycostatin ointment (Mystatin Squibb) contains 100,000 units of Mycostatin per gram of Plastibase (Squibb Oleaginous Ointment Base).

Indications: For the treatment of fungus infections of the skin caused by Candida albicans (monilia).

If this organism is the primary cause of infection, such dermatological conditions as dermatophytosis ("athlete's foot"), perleche, paronychia, intertrigo, "diaper rash" and other cutaneous lesions can be expected to respond to Mycostatin Ointment.

Mycostatin ointment may be used concomitantly with other forms of Mycostatin if cutaneous or mucocutaneous manifestations of moniliasis are present. Monilial infections of the skin have become increasingly common with the use of broad spectrum antibiotics which may permit superinfection with Candida albicans.

Administration: Apply directly to monilial lesions once to several times daily. Continue until the lesions have healed.

How Supplied: Mycostatin Ointment, containing 100,000 units Mystatin per gram. In tubes of 15 and 30 grams. By E. R. Squibb & Sons, New York 22, N. Y.

Typical Prescription
℞ Mycostatin Ointment 30 gm.
(Squibb)
Disp. #1 Tube
Sig: Apply night and morning

Minit-Rub

Description: Contains lanolin, camphor, menthol, methyl salicylate and oil eucalyptus.

Indications: Stiff aching muscles, tired burning feet. Relives neuralgic pains, muscular aches and strains.

Advantages: Will not stain clothes or bed linens because it is both greaseless and stainless, according to information given us by Bristol-Myers Co.

Administration: Rub in gently but firmly where indicated. As a steam inhalant to relieve upper bronchial congestion, stuffiness or croupy coughs due to colds, place one tablespoonful of minit-rub in an electric steam kettle (or simply in a pan or bowl of boiling water), inhale fumes deeply. Replenish when the fumes weaken.

Supply: In tubes of 1 ounce and 1.75 ounces.

Typical Prescription
Rx Ung. Minit-Rub. . . .
(Bristol-Myers)
Disp. Tube #1.
Sig: Apply to affected part b.i.d.

Chlor-Trimeton Maleate Antihistamine

Generic Name: Chloroprophenpyridamine.

Description: Each tablet contains chloroprophenpyridamine 4 mg. Each repetab contains 8 mg. of the active constituent, 4 mg. in the outer coating to produce immediate symptomatic relief, and 4 mg. in the core of the tablet coated for delayed action.

Syrup: Each 4 cc. (1 teaspoonful) of the

syrup provides 2 mg. of chloroprophen-pyridamine maleate.

Injection: Each cc. of the injection contains 10 mg. or 100 mg. chloroprophen-pyridamine maleate in aqueous solution. The Cream contains 10 mg. chloroprophen-pyridamine maleate per Gm. in a water-washable base.

Action and Uses: Histamine antagonist effective in small doses in preventing or relieving manifestations of allergy. Low incidence of undesirable side effects.

Tablets and Syrup: For use in symptomatic relief of hay fever, urticaria, allergic eczema, angio-edema, serum sickness, and drug sensitivity.

Injection: Indicated where more prompt action is desired than would be obtainable with oral medication; allergies of the skin, mucous membranes, urticaria, hives, contact dermatitis, rhus poisoning, angio-edema, insect bites. May be used in conjunction with desensitization procedure.

Cream: Effective in topical application. Excellent in the management of acute and chronic pruritic and allergic skin disorders.

Administration: Tablets: One-half (½) to one 4 mg. tablet 3 or 4 times daily. Repetabs: One 8 mg. tablet at bedtime or every 8 or 10 hours during the day. (Caution: for administration to adults only).

Syrup: Adults and adolescents: 1 to 2 teaspoonfuls 3 or 4 times daily. Children: ½ to 1 teaspoonful 3 or 4 times daily.

Injection: 100 mg. intramuscularly or subcutaneously, 100 mg. per cc. in 2 cc. multidose vials. From 0.05 to 0.1 cc. (5 to 10 mg.) in same syringe with compatible aqueous medications or allergenic extracts.

Cream: Apply to affected areas 1 to 4 times daily.

Caution: Patients should not engage in mechanical operations which require alertness, until it is known that they do not respond to the drug by becoming drowsy or dizzy.

Supply: Chlor-Trimeton Tablets, 4 mg. bottles of 100, 1,000. Chlor-Trimeton Maleate Cream 1% 50 Gm. tube. Chlor-Trimeton Maleate Injection 100 mg./cc. 2 cc. ampoule. Box of 1. Chlor-Trimeton Maleate Repetabs, 8 mg. bottles of 100, 1,000. Schering Corp.

Typical Prescription:

℞ Chlor-Trimeton Tablets 4 mg. (Schering)
Disp. No. 48
Sig: One (1) tablet t.i.d.

℞ Chlor-Trimeton Repetabs 8 mg. (Schering)
Disp. No. XXIV.
Sig: One (1) tablet at bedtime.

My B-Den

Varicose vein complications and bursitis therapy

Generic Name: Adenosine-5-monophosphate.

Description: Aqueous solution — each cc. contains 20 mg. of adenosine-5-monophosphate as the sodium salt. Tablets—each tablet contains 20 mg. of adenosine-5-monophosphoric acid. Sustained action — 20 mg. and 100 mg. per cc. adenosine-5-monophosphate as the sodium salt in a gelatine base.

Action and Uses: This preparation has been effective in treating varicose vein complications (pruritis, dermatitis, ulceration) pruritis (ani, vulvae, scroti, idiopathic). Recent reports indicate that My-B-Den is effective in treating tenosynovitis (bursitis).

Administration: Sustained action — 1 cc. (20 mg.) intramuscularly, 3 times weekly up to 4 to 6 weeks. Sublingual tablets: Orally, 5 to 7 tablets daily at hourly intervals, for 4 to 7 days; then 2 to 5 tablets daily depending on response. Aqueous solution: 1 cc. injected intramuscularly at hourly intervals to a total of 5 per day, for 3 consecutive days. Thereafter daily injections as indicated. Caution: Do not ad-

minister intravenously.

Supply: My-B-Den supplied as follows: Aqueous solution in Ampuls: 1 cc. – in boxes of 5, 50 and 100. 100 mg. per cc. in ampuls 1 cc. in boxes of 5 and 50. My-B-Den–sustained action– Vials, 10 cc.–Boxes of 1, 12; 100 mg. per cc. in boxes of 1 and 12. My-B-Den–Tablets, 20 mg. in bottles of 20, 50 and 500. Ames Co. Inc. (Bischoff)

Pantho-F 0.2%

Hydrocortisone with Panthoderm Cream

Description: 0.2% hydrocortisone in a stainless, white, stable, water-miscible, cosmetically pleasant cream containing 2% pantothenylol (Panthoderm Cream). This lower-strength dosage form of Pantho-F Cream effects substantial economy in the treatment of extensive skin areas, or where therapy is long continued. It is effective in approximately 90 per cent of cases which respond to higher strength topical hydrocortisone. For more stubborn itching dermatoses the regular Pantho-F Cream (1% hydrocortisone with 2% panthothenylol) is available as usual.

Action and Uses: Allays inflammation; relieves pain, itch and swelling; checks oozing and edema; reduces crusting and scalding; promotes rapid granulation and healing in: Eczemas (infantile, housewives', etc.), dermatitis, pruritus ani et vulvae, lichen chronicus simplex, in all skin conditions requiring anti-inflammatory, antipruritic, healing therapy. Non-irritant, rarely sensitizes. Easily applied and removed without disturbing epithelization.

Application: Clean affected area, then gently rub in small amount of cream 2 or 3 times daily or as required. Frequency of use may be reduced as improvement is noted.

Supply: Pantho-F 0.2% Cream–Tubes of 15 Gm. and 2 oz.; 1 lb. jars. Also available: Pantho-F Cream regular in 5 Gm. and 20 Gm. tubes. U. S. Vitamin Corp.

Empirin Compound

Description: Analgesic, antipyretic, and antirheumatic. Each tablet contains: 2½ gr. Acetophenetiden; 3½ gr. Acetylsalicylic Acid; ½ gr. Caffeine.

Indications: Mild pain, simple headache, neuralgia and common colds; suitable for children.

Administration: One or two tablets repeated as required.

Supply: In bottles of 12, 25, 50, 100 and 500. By Burroughs Wellcome & Co., Inc., One Scarsdale Road, Tuckahoe 7, N. Y.

Typical Prescription

Rx Tablet Empirin Compound
Dispense No. XXV.
Sig: One tablet every 3 hours.

DR. OWENS ATTENDS NATIONAL CONFERENCE OF PHARMACEUTICAL SOCIETIES

Dr. Owens of the Council on Chiropodical Therapeutics and Pharmacy was invited to present the Oklahoma Chiropodical Formulary to the National Conference of Pharmaceutical Societies. It is anticipated that they will present it to State Pharmaceutical Associations to be published for the mutual benefit of the Chiropody and Pharmacy professions. The Formulary has been referred to a special committee for study. It is requested that each N.A.C. State Society contact the local members of the National Conference of the State Pharmaceutical Association Secretaries. Each State Secretary has been provided with the name of the local member.

Harry L. Hoffman, Ph.G., D.S.C.
Chairman, Council on Chiropodical Therapeutics and Pharmacy

THE PODOPEDIATRIC CLINIC

JOHN T. SHARP, D.S.C.
Chairman, Committee on Children's Foot Health

This section is devoted to a discussion of the problems peculiar to the child's foot. A separate subject will be considered each month, on a question and answer basis. Members are invited to send in their questions relative to the various phases of podopediatrics. Questions will be answered in accordance with the heading under which they fall.

FLAT FOOT IN THE CHILD

Is flat foot a common finding in childhood?

Flat foot is probably the most common postural foot problem seen in the child. It is important to bear in mind, however, that the term "flat foot" embraces a foot condition which may be either normal or pathological.

What is a "normal flat foot"?

This may take one of three basic forms: (1) the so-called "pes planus," which consists of a foot presenting a flattened longitudinal arch, regardless as to whether the foot is at rest or in the weight-bearing position. There is practically no deviation of the tendo achilles on weight-bearing in a foot of this type. It is asymptomatic in uncomplicated cases, is often racial and frequently familial; (2) the "developmental flat foot" which represents a foot whose flattened appearance is the result of developmental immaturity. This type foot presents a normal arch on rest, but the arch is definitely lowered on weight-bearing, and the tendo achilles curves outward—the so-called "Helbing's Sign." This is a foot in transition, posturally speaking. It is a foot whose supporting structures and osseous framework are inadequate (temporarily) to cope with the weight-bearing demands and gravitational stress placed upon it. This is an immature foot, but it is also a normal foot. It is seen in most children during the early weight-bearing years; (3) "Familial Pes Valgoplanus" forms. These are flat feet which, like the pes planus type, are inherited, but they differ from this variety in that they present an arch which is fairly normal on weight-bearing. However, when this foot is subjected to body weight, its medial longitudinal arch is lowered, and its heel rolls into valgus. Although from its appearance per se this foot seems pathological, it usually gives its owner little or no trouble. It is a familial foot form, and does not usually respond to treatment because it is frequently associated with inherited bone or ligamentous anomalies.

If flat foot is sometimes normal in early childhood, how does one distinguish between the normal and the abnormal in this age group?

It should be stated at the beginning that posture alone must not be considered the criterion of normalcy in these feet. If the foot in question is devoid of accompanying symptoms, it is to be considered normal. If on the other hand the foot in addition to its posture, presents fatigue, pain, abnormal shoe wear, awkward gait, skin excresences secondary to the posture (like a dorsal heloma on the fifth toe or a calloused great toe), or short heel cord, it is to be considered abnormal and some treatment must be instituted.

What is the role of the short heel cord in cases of flat foot?

In order to satisfactorily understand this, one must first be familiar with the functional plane of the ankle joint. This joint is so constructed anatomically that as the foot goes into extension it has a tendency to invert slightly, and conversely, as the foot goes into flexion it tends to evert slightly. In the presence of a short heel cord, the only way in which the heel can

receive its normal weight-bearing complement during gait is by the foot going into eversion. This of course places the foot under strain and encourages abnormal weight-bearing.

What is a "short heel cord?"

From a practical, functional standpoint, short heel cord may be considered to exist in all instances where the tendo achilles is of a length which does not permit the foot to assume a flexion attitude of at least a right angle with the leg.

Is it true that "belly sleeping" encourages the production of flat feet in the child?

It would be more accurate to state that this postural attitude gives rise to external torsional problems which may in turn aid in the production of flat foot in the child. However, it must be remembered that this attitude may also give rise to pigeon toe in some instances. The important point here is the manner in which the foot itself is positioned. If the belly sleeping child assumes a position of foot adduction, internal rotation of the leg and pigeon toe result; if on the other hand the foot is abducted, external rotation of the leg and flat foot are encouraged.

How may "belly sleeping" be eliminated as a causative factor in flat foot?

The simplest procedure is the use of a Denis Browne Splint during the child's sleeping hours. It is important to remember that there are certain postural attitudes that some children assume during the waking hours which must also be controlled if best results are to be obtained in flat foot treatment. The best example of this is the frog-like position some children display when they sit. Attitudes such as these require parental supervision for correction.

Does prolonged illness sometimes predispose to a pathological flat foot?

Since such illness has a deleterious effect upon muscle and ligamentous tone, it may weaken the weight-bearing capability of the foot sufficiently to aid in the production of a flat foot during the ambulatory period following the stage of bed-rest. For this reason, careful attention should be given to the feet during the recuperative phase of illnesses of this type. Exercise and temporary support to the foot are usually in order.

Is the Denis Browne Splint of value in the management of flat foot in children?

Yes, primarily because it offers a method of controlling the position of the foot during the sleeping hours. For best results in the management of pathological flat foot in the child, the foot should be held in the corrected attitude for as many hours as possible out of the twenty-four which constitute a full day. This implies the use of some device to control foot posture during sleep. However, the Denis Browne Splint is of little value in children over about four years of age.

What is the best method of treatment in instances of flat foot in children?

This is an extremely moot question, in spite of the claims one hears relative to certain therapeutic forms. Most of the existing methods of treatment are satisfactory if properly carried out. The fundamental tenets of treatment should be as follows: (1) Be certain that the foot is *in need* of treatment before treating it; (2) Question the parents carefully as to the familial foot type, so that some prognostic impression may be obtained; (3) Do not overcorrect. Simply place the foot in good functional position and maintain it in this attitude constantly; (4) Always correct short heel cord if it exists; (5) Always x-ray the foot before starting treatment to rule out the presence of bone anomalies; (6) Always treat concomitant rotational problems of the leg.

ABSTRACTS FROM THE CHIROPODY LITERATURE

ROBERT SHOR, D.S.C.
LOS ANGELES, CALIF.
Chairman, Committee on Publications

Editors of Local, State and Regional Publications are requested to provide copies to the Chairman of the N.A.C. Committee on Publications who is preparing this section of the Journal.

THE AUSTRALIAN CHIROPODIST

Non-Surgical Treatment of Acquired Contracted Foot and Dorsal Bursitis, Emanuel W. Demeur, The Australasian Chiropodist, 1: 5, January 1957.

Demeur describes a treatment which he has found most successful in correction of acquired contracted foot, usually accompanied with derangement of the tarso-metatarsal articulations, mainly the articulation of the base of the first metatarsal with the internal cuneiform and less frequently with the upward displacement of the middle cuneiform.

The step in the treatment presented consists of adjusting the joint prominence on the dorsum of the foot by a downward thrust applied by the pisiform bone of the hand properly placed directly over the upward misplaced bone, whether it be the base of the first metatarsal, the internal cuneiform or the middle cuneiform.

The foot, having been stretched by the relaxation of the plantar tissues, offers a longer base for the body to balance itself on, and, therefore, greater stability.

THE BRITISH CHIROPODIST

The Management and Treatment of Pressure Necrosis, L. C. Gibbard, The British Chir. J., 3: 62-64, March 1957

A discussion of pressure necrosis arising from (1) External pressure which is great or persistent enough to decrease or overcome the viability of tissues and (2) Internal pressure within the soft tissues arising from swelling which disrupts the cell pattern and stops the interchange of salts and fluids.

The treatment of patients with pressure necrosis is divided into three headings. These are the removal of external pressure which is achieved by normal chiropodical techniques; reduction of swelling; and the control or prevention of infection.

CALIFORNIA NEWSLETTER

Vitamin Deficiencies and Chiropodical Symptoms, Rayfield Aronow, Calif. Newsletter, Sept. 1956.

Dr. Charles G. King, scientific director of the Nutrition Foundation, states that ". . . The top five or six causes of death are linked directly to our day-to-day food habits." Nutritional deficiencies directly affect our work and this paper simply attempts to refresh our minds on that point through closer correlation to chiropody of the symptomatology of the more common or likely to be seen vitamin-mineral deficiencies.

Aronow presents two tables; Table 1 consists of the alphabetical symptomatology and corresponding specific deficiencies. Table 2 is a discussion of the deficiency symptoms and signs by vitamins which are of special interest in chiropody.

In keeping with the increased interest in human nutritional requirements, it is suggested that chiropodists give more attention to this field.

THE CHIROPODIST

Hyaluronidase, A. Myatt, The Chiropodist, 4: 118-122, April 1957 (London, Eng.).

Hyaluronidase is an enzyme originally

discovered by Meyer and Palmer in 1934. The action of the enzyme is to lower the viscosity of hyaluronic acid, allowing more permeability of membranes and other tissues. The action is only transitory.

Myatt presents two cases in detail out of eleven treated for verruca. Various cases of verrucae of long standing have been treated by applying a piece of cotton soaked in Hyalase to the verruca for 15 minutes.

Also presented are two cases of chronic fibrous corns which were treated by the preliminary application of Hyalase for 10 minutes followed by routine chiropodical care.

In all cases, Wyatt believes that a greater reaction resulted from the use of the caustics as a result of the preliminary application of Hyalase.

CHIROPODY RECORD

A Study of Calcaneal Spurs, Daniel A. Junod, Chiropody Record, 1-2: 4-14. Jan.-Feb. 1957.

A review of the literature is presented regarding calcaneal spurs. The various causes of calcaneal spurs are mentioned, a few of which are: focal infections with the ordinary cocci; metabolic disturbances; trauma due to injury and improper shoes; static conditions such as flat feet; and short plantar fascia.

Junod discusses the chief characteristics, etiology, pathogenesis, and treatments of calcaneal spurs. The material presented under treatments is generally the quotations of the various practitioners' methods. The aperature pad as advocated by Dr. Carleton is discussed. Where the aperature pad fails a pad with a posterior cut out for the entire inferior area of the calcaneus is described. The non-operative treatments by Drs. Otto Schuster, Dickson & Diveley, Hauser, and Lewin are presented. The operative approach of Drs. Steindler, Speed and Smith are also elaborated upon.

Calcaneal spurs are most frequently seen between the ages of forty and sixty years and is often associated with chronic arthritis and arteriosclerosis.

FLORIDA FOOTPRINTS

Reeducation of Patient's Attitude of Walking, John J. McCaffrey, Fla. Footprints, July 1956.

Probably the least used therapy employed in the rehabilitation of functional disabilities of the feet is the reeducation of the patient's attitude of walking.

Dr. F. W. Jones states that "Those who would treat the many minor, but still vastly important, disabilities of the feet should have constantly in mind the fact that the muscles of our feet and toes are all the servants of our conscious cortical control" . . . The area for control of the foot and leg is found in the cerebral cortex. This center is developed by education.

The adoption of a planned program for the reeducation of the patient's walking attitude is a very important factor in the therapy for functional foot disorders.

A reeducation program will only be successful when used in conjunction with all the other forms of therapy.

Familial Foot Findings—Case History of Mother and Son, E. F. Wunderlich, Footprints, Chir. Assoc. of Fla., 6:3-6, May 1957.

The main topic for this paper is a comparative discussion of the clinical findings and the roentgenological findings of a 68 year old white female and her adult son.

Heredity has been defined as the transmission of potential characteristics from parents to children.

The heredity traits readily seen in this case are pronation syndrome; digital rotation and contractions; os intermetatarsum; biparte sesamoids; and metatarsal inclinations as to rotation, valgus, etc.

J. WISCONSIN CHIROPODY

Local Anesthesia in Morton's Neuralgia, Otto N. Schuster, J. Wisc. Soc. of C., 1-9:10, May 1957. (Rep. from R.I. Chiropody J.).

An investigation of the unfavorable results reported by Podiatrists using various local anesthetics for the relief of Morton's Neuralgia.

The findings of Schuster and Slevin are as follows: 1. Pain following a few hours after injection is due to using anesthetics with a pH of less than 5.8. If pH is brought up to 7.4 no swelling is encountered. 2. Failure to obtain relief, even after repeated injections, is due to faulty technique. The injection must reach an area just above the plantar fascia to actually contact the impinged nerve. 3. Nausea, fainting spells and fever are probably due to a low pH of the anesthetic. 4. Tenosynovitis is due to an injection of the tendon sheath with an anesthetic having a low pH. Anesthetics with a pH of 7.4 do not produce these effects. 5. Swelling and aching at the site of injection is usually due to accidental injection into one of the intermetatarsal bursa.

BOOK REVIEW

AN INTRODUCTION TO THERAPEUTICS FOR CHIROPODISTS, by Peter J. Read, F. Ch.S., *Cloth. $6.00. Pp. 262. Bailliere, Tindall & Cox. 1957.*

This edition is divided into two parts. Part I containing 17 chapters is devoted mainly to the various aspects of inflammatory processes, the body's reaction to infection, and the healing processes. Rather than duplicate the approach used in texts on therapeutics, Read has based the construction of his textbook upon the physiological and pathological considerations of therapeutics. Part II, called Monographs, is an alphabetical compilation of the drugs used in chiropody, attention being focused on both their physical and chemical characteristics along with their clinical usage. This section can well be titled chiropodical Materia Medica.

The chapters on Instrument Sterilization and Treatment of Warts were thought to be lacking by this reviewer. The important subject, The Sterilization of Instruments, has only two pages allotted for its coverage and only cold sterilization is briefly touched upon. None of the newer drugs used in this field are mentioned. The Treatment of Warts deals only with a few of the common topical escharotics. No mention is made of Vitamin A. Therapy or its therapeutic action in stimulating normal epithelization and inhibiting keratinization.

The Monograph in Part II discusses only external medications. The nomenclature of the British Pharmacopoeia and the British Pharmaceutical Codex is used.

In the United States, where chiropodists hold licenses for narcotics, dangerous drugs, and use many of the internal medications in treating foot ailments, it was the opinion of this reviewer that this omission is one of the shortcomings of the book. However, despite the above criticisms, the book is well organized and should be of value to the student as well as a ready reference for the chiropodist.

Robert Shor, D. S. C.

DIGESTS FROM THE LITERATURE

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library at a cost of fifty cents for five consecutive pages.

ANESTHESIA AND ANALGESIA

Nalorphine, a Potent Analgesic in Man, A. S. Keats and J. Telford. J. Pharm. Exper. Ther. 117: 190-96, 1956.

The analgesic potency of nalorphine as compared with morphine was studied in postoperative patients in the surgical service, who had severe postoperative pain, but were sufficiently orientated to answer simple questions. Each patient received alternate doses of a drug at 1-dose level and a placebo as often as every hour if necessary to relieve pain, for as long as 30 postoperative hours. Nalorphine hydrochloride 5, 10, and 15 mgm. per 70 kgm. of body weight, and morphine sulfate 5, 10, 15, and 20 mgm. per 70 kgm. were used. No patient received both drugs. Each patient was given at least one dose of placebo. Placebo reactors were eliminated. Nalorphine proved as potent an analgesic as morphine and non-addicting, but produced side-effects. Marked sedation occurred in 14 of 20 patients convalescing from minor surgery. They reported being dizzy, groggy or drunk-like; 3 had vividly colored dreams and visual hallucinations. One was disorientated.

CIRCULATORY SYSTEM

Treatment of Phlebothrombosis and Its Sequelae with Intra-Arterial Trypsin, M. F. Villamil and H. Beherán. Angiology 7: 179-85, 1956.

Intra-arterial trypsin with procaine and an antihistaminic were used in treatment of acute phlebothrombosis, thrombophlebitis, and their sequelae. This treatment relieves pain and edema in acute phlebothrombosis, although it does not entirely prevent occurrence of sequelae. The immediate effect has been alleviation of pain and reduction of objective tissue tension in the diseased limb and the evolution of the disease is seemingly shortened. One patient with primary thrombophlebitis with an allergic background showed an anaphylactic-like local reaction, making stoppage of the drug necessary. Trypsin showed only poor results in cases of postphlebitic edema, was somewhat effective in dermatosclerosis, and highly effective in postphlebitic ulcers. Neither electrocardiac changes nor cardiac abnormalities occurred in the patients treated.

CIRCULATORY SYSTEM

Recurrent Varicose Veins, K. A. Lofgren, T. T. Myers and W. D. Webb, Jr. Surg., Gynec. & Obst. 102: 729-34, 1956.

A five-year study is reported of 510 surgical procedures performed on the lower extremities of 341 patients for recurrent varicosities. Four per cent were performed because of reccurent varicosities of the lesser saphenous veins and the remainder of the greater saphenous veins. Ligations had been inadequate in 61 per cent of the total operations and adequate in 39 per cent, but in all instances there remained incompetent superficial veins in the thigh, leg or foot, and in many cases incompetent perforators. Efforts are now being made to locate perforators before operation and eliminate them during the operation. In some cases where the original ligations have been adequate, the gap remaining after resection of the saphenous vein becomes

bridged by new tortuous small vessels which pass through the scar tissue from the proximal end of the greater saphenous channel below to the femoral vein above in the area of the fossa ovalis. This indicates that leaving the greater saphenous channel in the thigh allows a re-hookup to occur.

The surgical treatment of varicose veins recommended is adequate ligation above at the saphenofemoral or saphenopopliteal junctions, thorough removal of incomplete superficial veins below, down to the dorsum or lateral aspects of the foot, by stripping and dissection and, lastly, individual ligation and resection of all incomplete perforators. All incomplete veins must be thoroughly dissected to prevent recurrence.

Investigations on Chronic Arteriospasms of the Limbs, S. Nowicki. Bull. Soc. Amis Sci. Poznan Ser. C, No. 5, 1955.

A series of 10 cases of disturbances of blood supply to the limbs is described in patients aged 23 to 50 years. The duration of symptoms was from 1 to 4 years and were intensified by emotional upsets; no disturbances occurred in other organic systems. The blood pressure was usually elevated in the affected limb, and the oscillometric index was higher than mean level. Patients complained of fatigue in the calves and feet after standing or walking for some time. Rest pains were described as a pressure, tearing, pricking, burning, numbness or coldness in the foot or hand. These pains sometimes became intolerable; raising of the knee and flexing of the limb diminished the pain. There was no necrosis of tissues, no skin changes, nor alteration in the shape of the limb. This aided in distinguishing chronic arteriospasm from endarteritis obliterans and arteriosclerosis obliterans. Transitory fluctuations of the pulse tension occurred in the following arteries: tibial posterior, radial, and (more often) in the dorsalis pedis where the pulse was rarely palpable. Yet the oscillogram showed the tibial arteries patent. Blood pressure in the lower extremities was usually elevated, but normal in the upper limbs. The effect of vasodilating drugs in these cases was rather satisfactory, for example, intravenous injection of Priscol. Conservative or operative therapy was ineffectual in changing the functioning of the vasomotor system of the extremities. Removal of the medulla of the suprarenal gland was more effective.

Treatment of Arteriosclerotic Occlusive Disease in 101 Lower Extremities by Arterial Homografts, E. S. Crawford, O. Creech, Jr., et al. South. M. J. 49: 665-70, 1956.

Surgical treatment of chronic arterial insufficiency of the lower extremities until recently has consisted of either lumbar sympathectomy or amputation. Sympathectomy releases the vasoconstrictor influence of the sympathetic nervous system, thereby producing maximum vasodilatation in the unobstructed parts of the arterial bed. The local circulation increases with enlargement of the vascular bed, particularly in the skin. Lesions which necessitate amputation are usually cutaneous in origin. However, sympathectomy does not produce much improvement in intermittent claudication, nor restore pulsatile circulation to the ischemic extremity. Eventually amputation follows in about 30 per cent of cases where sympathectomy is employed. It has been found that the occlusion is often segmental with a considerable patent segment proximal and distal to the segment. This allows direct attack upon the occlusive process to re-establish arterial continuity. Use of endarterectomy for this purpose was successful in mild cases but failed usually when performed on small vessels of the leg. Also, postoperative thrombosis frequently caused further decrease in circulation and sometimes necessitated amputation.

Lyophilized arterial homografts were used to treat 101 extremities with occlusive

lesions located distal to the level of the aortic bifurcation. Cases with extensive gangrene or serious systemic disorders were excluded. When the only indication of inadequate circulation was intermittent claudication, an operable distal segment was found in 75 per cent of cases, but found in only 55 per cent of cases of inadequate circulation at rest. However no patient was excluded from operation on purely clinical grounds. The percentage of operability in diabetics was only a little less than in nondiabetics. Cases in which arteriography shows favorable conditions are operated on and grafts inserted unless there is advanced cardiac or renal disease present. The procedure is used in cases in which amputation seems pending; poor risk patients often tolerate the grafting procedure better than sympathectomy or amputation. Excision of the occluded segment and replacement by graft was performed in 26 extremities; the end-to-end by-pass procedure was used in 75 extremities. Restoration of circulation distal to the occlusion was accomplished in 92 per cent of the extremities treated. Three deaths during operation were caused by acute myocardial infarction. In the successful cases there was great clinical improvement, relief of claudication, rest-pain and pain from ischemic ulceration; ischemic ulcers healed quickly; early gangrenous changes subsided. No patient had recurrence during the 2½-year follow-up. Major amputation was prevented in 18 of the extremities operated on. Amputation was necessary on only 2 cases.

DERMATOLOGY, ALLERGY, FUNGUS DISEASES

Novobiocin Dermatitis, R. D. Barnard. Lancet 1: 1068, 1956.

Attention is called to the grave problem of indiscriminate use of penicillin and the panallergenization to that antibiotic. The cationic mycin antibiotics (streptomycin, the tetracyclines, and the carbomycins) do not produce comparable sensitization. Although the streptomyces-derived antibiotics are potent contact dermal sensitizers, they are only weakly allergenic when injected or ingested.

The Practical Management of Contact Dermatitis, T. G. Johnston and A. G. Cazort. South. M. J. 49: 752-56, 1956.

Characteristic diagnostic points in contact dermatitis are itching, burning or stinging that can be almost unbearable, and the appearance of vesicles on an inflamed base which in about three weeks give way to desquamation. However, if the contact is frequent, the eruption may be more or less continuous. A similar condition is exfoliate dermatitis which may be due to chemicals taken internally by ingestion, inhalation or injection. Many of these patients are referred to the allergist by a dermatologist who has already made various skin tests. A clue to the contact material may be given by the patient's occupation; however many of these materials are those encountered in the home. A careful history must be prepared which must be continued until the offender is discovered. A list of sensitizers is given, including metals, dyes, medications, weed oils and other materials. Tests with a tiny amount of these substances may reveal the agent. Until the cause is discovered, the patient is asked to use no medications except as prescribed, use no soap on the irritated areas, and use only cotton clothing next to the skin that has been washed in Ivory or Lux flakes, then carefully rinsed. Use of wet, cold compresses is described; these are left on for 15 to 60 minutes two to six times a day; followed each time by an appropriate lotion or cream, such as 3% Vioform Cream. Acute itching may be relieved by use of Tronothane lotion or Quotane lotion. Antihistamines must not be used locally, nor "sulfa" drugs, penicillin or Furacin. Testing must continue until the causative factor is found.

Chromoparasitic Verrucose Dermatitis (Phialophoromycosis); Surgical Treatment, R. Farina. J. Internat. Coll. Surg. 25: 545-50, 1956.

This infection occurs mostly in farm workers. The fungi penetrate the skin through small cuts in the foot, leg and thigh, and occasionally in the hands, forearms and arms. It does not affect the general health but is disagreeable in appearance. Diagnosis is made by discovery of the parasite. It is rarely propagated from the original lesion. Careful search for the parasite between the lamina and laminela is made in the material withdrawn from the lesions, and studies made of the fungus by culture. Medical therapy is highly dangerous. Exeresis of the lesions with ordinary or electric scalpel or by electrocoagulation leaves raw areas if the lesions are extensive. The author uses electrosurgical exeresis of the lesions followed by free skin grafts. Iodates are given at the same time to activate any focus deeply imbedded, so that it will not escape notice. A recurrent nodule results if a remnant of pathologic tissue is left. Five cases are reported.

Diagnosis of Foot Ringworm, J. G. Holmes and J. C. Gentles. Lancet 2: 62-63, 1956.

In an examination of the feet of over 2,000 workmen selected at random in a number of industries, only 9.5 per cent were found to have normal feet on mycological examination; 90.5 per cent had some skin disorder. Of these, 21 per cent proved to be infected; a dermatophyte was cultured in 93 per cent; 7 per cent were positive only on microscopic study. The most common symptoms were peeling, maceration with peeling, vesicles, and slight fissures (in that order). No very definite clinical differences were observed between most of the lesions attributed to Trichophyton rubrum, and most of those associated with T. mentagrophytes. Clinical diagnosis of foot ringworm is seldom possible. The presence of vesicles and erythema are the two most valuable signs; maceration and peeling are unreliable signs. Since many fungicides are nonspecific in action and serve only as general antiseptics, all such treatments are followed by some improvement in foot hygiene, but this is no proof of the presence of ringworm. For diagnosis, clinical symptoms must be supported by dermatophyte culture or microscopic recognition of the fungal hyphae.

Surgical Planing of the Skin: Dichlorotetrafluoro-ethane as a Freezing Agent, R. Luikart, II, S. Ayers, III, and J. W. Wilson. California Med. 84: 151-54, 1956.

Surgical planing (dermal abrasion) is used in treatment of scarring by acne, chickenpox, smallpox, and trauma and treatment of multiple senile keratoses, fine wrinking and tattoos. It is usually an office procedure performed under an anesthetic such as Demerol. By use of a jet-spray, the skin is frozen and planed almost simultaneously. The freezing agent, dichlorotetrafluoro-ethane, eliminates the hazard of inflammability and explosion. Planing is contraindicated where the cutaneous adnexa are absent, or if scarring is not sufficient to warrant the procedure.

Vioform and Hydrocortisone in Dermatologic Therapy, S. D. Allison. Amer. Practitioner 7: 1119-20, 1956.

A combination of vioform and hydrocortisone was used successfully in treatment of various dermatoses, and without producing irritation. The combination favored was vioform 2 to 3% and hydrocortisone 1 to 2% in a water miscible base such as Acid Mantle Creme, or Unibase. The treatment was particularly successful in soborrheic dermatitis, neurodermatitis and numerous hand eruptions.

Separation of Epidermis from Dermis by Filtrates of Trichophyton Mentagrophytes, C. N. D. Cruickshank and M. D. Trotter, Nature 177: 1085-86, 1956.

Incubation for about two hours of thin slices of skin from the ears of guinea-pigs with this filtrate affected the epidermal-dermal bonds and allowed the epidermis to be separated from the dermis with fine forceps. This indicated that filtrates of T. Menta grophytes contain one or more enzymes which are probably proteolytic. This finding seems to explain the pathology of fungus infections: The fungus grows in the superficial layers of the epidermis, the proteolytic enzyme is diffused from it, and this loosens epidermal attachments. It is also suggested that the proteolytic enzyme may cause the itching which occurs with epidermophytosis.

Trichophytin Sensitivity of the Immediate Wheal Type: Report of a Case with Unusual Manifestations, and Response to Hydrocortisone, S. G. Cohen. J. Allergy 27: 332-37, 1956.

A 50-year-old woman had a 10-year history of recurrent attacks of crural fungus infections with secondary erythematous, edematous lesions of the buttocks, thighs, forearms and flexor surfaces of the elbows and knees. Cultures of trichophytin gypseum were obtained from the lesions and intracutaneous tests made with the trichophytin extract. The result was an immediate positive wheal-flare and a negative 48-hour delayed type reaction. The secondary lesions responded well to hydrocortisone given orally; the primary fungus infection was not affected by corticosteroid therapy.

DIAGNOSIS

Electromyography in Clinical Practice, H. W. Mims. South. M. J. 49: 804-07, 1956.

Electromyography provides a means of conclusively demonstrating denervation of skeletal muscle, as indicated by fibrillation. It also aids in diagnosis and prognosis of various neuromuscular diseases, and in some cases may be used in therapy. It should not be substituted for a good physical examination nor for simple methods such as electrical testing, for example, chronaxie. The apparatus used consists of receiving electrodes of the percutaneous type, which are taped to the skin over the muscle to be tested, or needle electrodes inserted into the muscle itself. Needle electrodes are required for diagnosis of lower neuron injuries or disease since denervation voltages cannot be demonstrated by skin electrodes. Normal skeletal muscle at rest shows no electrical activity. Denervation is shown by fibrillation, a fine, rhythmic contraction occurring on voluntary effort if there is denervation or reinervation is taking place. Fasciculation, a coarse, visible twitch of the skeletal muscle occurs involuntarily with the muscle at rest, thus distingushing it from polyphasic activity occurring on voluntary effort. Fibrillation which occurs only if destruction in the lower motor neuron is present is the only conclusive finding in electromyographic examination. It does not occur in upper motor neuron lesions, primary muscle diseases, nor in old degenerated muscle which has undergone fibrosis. However, absence of fibrillation is not an indication that no denervation is present, since scattered denervation fibers may not have been reached by the needle electrodes. In poliomyelitis fibrillation areas may be found in muscles showing little or no clinical weakness. For proper interpretation of electromyography examination it is necessary to know anatomy, physiology and pathology as in any other clinical or laboratory procedure. Electromyography may be used in muscle re-education as the patient has difficulty in using a specific muscle which has undergone a change in normal status.

DRUG THERAPY

Some Abuses of Drugs in Therapy, D. G. Friend and G. A. McLemore, Jr. New England J. M. 254: 1223-31, 1956.

Many new drugs are being prepared and some worthwhile ones are not sufficiently recognized because the physician does not know of them. Some drugs after considerable use are found to produce undesirable after-effects which limit their use, but physicians do not always learn of this fact. Great care must be used in selecting the proper dosage or poor results may be obtained; even death may result. Antibacterial agents, analgesic agents, sedatives and hypnotic drugs, cardiovascular and gastrointestinal drugs, cathartic agents, hormone therapy, and use of vitamins are discussed, together with proper dosages. They are too numerous to be outlined here. The article is well worth study.

MUSCULOSKELETAL SYSTEM

The Operative Treatment of Congenital Clubfeet, J. H. Kite. Amer. Acad. Orthoped. Surg. Instruct. Course Lect. 12: 100-105, 1955.

Untreated clubfeet of older children may be easier to correct by casts than those of children 1 to 2 years old which had been improperly treated. Whether correction is easy or not depends upon how the foot was held during the first weeks of treatment. Treatment is difficult if the foot is dorsiflexed before the navicular bone has been brought around in front of the talus, and if the casts slipped. When changing the cast brings no progress, the foot should be very gently manipulated under anesthesia. The forefoot is abducted, the heel everted, and then the foot dorsiflexed. When correction is not attained by casts and wedgings, lengthening of the Achilles tendon and division of the posterior capsule is required, but it is best to try the cast for a considerable time first. A bone operation is required for a child whose foot has been uncorrected or partially corrected but not until 8 years old, and preferably 10. Hoke's method of treating clubfeet following poliomyelitis is preferred. The operation is described in detail. Following operation, a plaster shoe is molded to the foot and after hardening, the plaster is continued up to midthigh with the knee slightly flexed. Greater comfort is provided by carrying the plaster above the knee. As soon as set, the cast is split over the dorsum of the foot to allow better circulation, for a swelling occurs during the first 24 hours. The morning after operation the cast is spread a little more. For two days the foot is kept elevated on two pillows until the swelling subsides. After 10 to 14 days the cast is removed to allow removal of the stitches, and then a new cast is applied by the operator. The patient may walk on crutches without weight-bearing for 6 to 8 weeks when the cast is removed and a normal shoe is worn. Crutches with weight-bearing are worn for 2 to 3 weeks. The operation requires a trained surgeon with good mechanical sense. The operation will have to be repeated if not done accurately, and the deformity recurs.

Wear and Tear in Joints, C. H. Barnett. J. Bone & Jt. Dis. 38 B: 567-75, 1956.

The role of synovial fluid in preventing wear and tear of articular surfaces was experimentally studied in the ankle of rabbits, a joint which is a typical weight-bearing joint of the hinge type. Intermittent pressure proved more damaging than constant pressure. Wear was less noticeable when the joint was exercised through the middle part of its total range or near the extreme plantarflexion, than when exercised over the last 30 degrees of dorsiflexion. The wear was confined mostly to the lateral, and less often to the medial, margins; the central hollow on the trochlear surface of the talus was unaffected. Microscopic

study showed disappearance of the flattened surface layer of cartilage cells, while round cells protruded through the free surface; later, the non-calcified zone of the articular cartilage disappeared; finally, there was erosion of the full thickness of the articular cartilage and underlying bone. Thus wear and tear of articular cartilage was shown to be consistently produced by reducing the viscosity of the synovial fluid. This confirmed the view that liquid film lubrication is important in the mechanical efficiency of joints. It was demonstrated that the thin films of synovial fluid are remarkably resistant to static compression. The joint of the human body which has to sustain the greatest pressure is probably the one between the first metatarsal and its sesamoid bones; it has been experimentally shown that as the heel rises from the ground the pressure at this joint can rise to 40 kilograms per sq. cm. Yet even here the fluid film is normally maintained between the articular surfaces. The articular cartilage acts somewhat like a sponge, taking in and releasing synovial fluid. Even in unfavorable circumstances as demonstrated in this experiment, articular surfaces are very resistant to wear and tear. The special properties of synovial fluid and articular cartilage which permits fluid film lubrication to exist within the joints, act as slowly moving, heavily loaded, reciprocating hinges. They are responsible for the greater resistance to wear and tear shown by synovial joints under physiological conditions.

Prosthesis for a Chopart-Type Amputation, C. T. Shelton. Tech. Report No. 5622, p. 1-3, A-D, 1956. Army Prosthetics Research Lab., Walter Reed Med. Center, Washington, D. C.

The Chopart-type amputation, a disarticulation of the foot through the mid-tarsal joints, results in a poor functional stump because an equinus deformity develops in absence of the ankle joint. An artificial foot because of the shortness of the forefoot cannot be dorsiflexed. A prosthesis is described with a fitted neoprene foot and a laminated ankle and shin section incorporated into the prosthesis. The prosthesis is light and is designed to provide maximum mobility and comfort, and a better walking gait. It eliminates the bulky appearance and gives a better fit to the shoe.

The Anterior Tibial Syndrome, G. E. Mavor. J. Bone & Jt. Surg. 38 B: 513-17, 1956.

Acute ischemia of the anterior tibial muscles with replacement fibrosis or necrosis of muscle in severe cases has been reported in 36 patients; the chronic form with long continued symptoms has received little notice. In most cases ischemic necrosis is described as secondary to severe injury complicating fractures of the bones of the lower leg; some cases, however, follow exercise. A case of persistent exercise ischemia affecting the anterior tibial group of muscles is described in a 24-year-old professional football player. The gradual onset came with intensive training and gradually grew more frequent and severe until it was necessary for him to rest after each ten minutes of exercise. A tightness, rather than a cramp, first occurred in the left leg, radiating from the shin down to the ankle; similar symptoms developed in the right leg but less severe. Two small hernias were noted over the upper third of the anterior tibial muscles on each side; this seemed to indicate that excessive pressure in the anterior tibial compartment occurred during exercise. Since the patient did not want to change his occupation, surgery was necessary. Incision of the fascia was made over the left tibial compartment, and included the fascial hernial gaps. A fascia lata graft 2 x 9 inches was used in repair of the wound. Biopsy of the tissue showed no abnormality. Six weeks later the same operation was performed on the right leg. A follow-up four years later showed no recurrence of exercise pain, and although the

muscles of that area were bulky, there was no hernia. The configuration of the anterior tibial compartment with its rigid walls and the vascular pattern of the muscles seem important factors in this disorder. With increasing tension within the compartment, circulation within the vascular network is embarrassed, causing ischemia leading to necrosis. Arterial thrombosis does not seem to be a factor. When ischemia is diagnosed in a chronic phase, excessive exercise should be given up or if impossible, depression of the anterior tibial space should be undertaken. Unless fascia transplantation is done, repair will only increase the tension within the compartment.

NERVOUS SYSTEM

Sensory Radicular Neuropathy: Report on Two Cases, C. H. M. Walker. Great Ormand St. J. (London) No. 10: 72-80, 1955-56.

Two cases of radicular neuropathy are reported. A boy of 10 years, institutionalized when very young as an unmanageable mental defective, had an indolent ulcer on a toe which was amputated before he was four years old; the same happened soon afterward in an adjoining toe. He was hospitalized at the age of seven, at which time a spina bifida occulta in the lumbo-sacral region was noted. He also had a severe organic disorder of the eighth cranial nerve which caused partial deafness. Nerve biopsy showed complete absence of myelinated fibers in the interdigital nerves of the left foot from which the two toes had been amputated; the remaining toes of that foot were amputated because of cellulitis and ulceration. The amputation scar broke down when irritated by sand in the special shoe he wore; the lesion healed slowly and relapsed frequently. Skin grafting was done successfully to the heel, but required constant supervision. His education improved gradually and with proper relationship established with his parents, his behavior was much improved. His unmanageableness had been caused by rejection by his parents and by treating him as a defective until the age of seven, although he proved to have an intelligence of 97. The second case was of a girl of 10 who had a history of intermittent limb pains every three months, lasting each time for several days. At the time of hospitalization she had an attack which began nine days before, and associated with fever, sweating and localized pain in both legs, arms and fingers. She had a deafness of the left ear with slight bone conduction. Onset of indolent ulcers is being watched for, to prevent amputation; the smallest abrasion is considered important. It is believed that the deafness in these cases was primarily due to a lesion in Scarpa's spiral ganglion. These are the youngest cases on record. Prognosis is very guarded in the first case. There is no definite evidence that the condition is progressive in the second case; the girl may go through life without additional trouble. However, if the disease is progressive she may develop indolent ulcers of the feet and possibly Charcot's arthropathy of the ankle joints. Her deafness may increase; prognosis is also guarded in this case.

ONYCHOLOGY

Koilonychia and Polycythaemia Vera, W. J. Stanley. Med. Illus. 10: 399-400, 1956.

Althouyh koilonychia usually occurs in cases of hypochromic anemia, it is also found associated with various other diseases. It accompanies thyrotoxicosis and occupational diseases. Its occurrence is unrelated to the hemoglobin level of the blood, for it is not found in severe pernicious anemia. In the case presented, the patient showed x-ray evidence of gastric ulcer, and there was cyanosis of the face and extremities, and polyonchia of the fingernails. Acne rosacea had been previously

treated but was still present. Routine medical treatment of peptic ulcer for six weeks brought little improvement. Dyspeptic symptoms disappeared two weeks after intravenous treatment with 5 millicuries of radioactive phosphorus. The blood count became normal in one month. The koilonychia gradually disappeared. An earlier reported case of koilonychia and polycythemia responded to whole-body irradiation. Production of iron deficiency in the new case seemed to arise from blood loss from the ulcer.

PHYSICAL MEDICINE; REHABILITATION

Combined Surgical and Physical Treatment of Superficial Sepsis, P. Bauwens, M. G. Cox and A. B. Coyer. Lancet 1: 774-75, 1956.

The advantages of combined surgical and physical treatment compared with surgical treatment alone was demonstrated in a study of paronychiae of the fingers; 141 patients were treated by removal of the nail and subsequent physical therapy. A control group of 33 patients were treated by surgical removal of the nails and dressings of 1 in 1000 proflavine hemisulfate. There was an average saving of three days in time of disability before discharge in cases where combined surgery and physical therapy were used. In patients treated with combined surgery and physical therapy plus application of starch-powder containing 2 per cent aureomycin, the average time was longer in the patients treated in the same way without application of this powder, but this may have been due to the fact that the patients in the former group were more severely infected locally, with much pus present. Physical therapy consisted of short-wave diathermy two times daily for periods of about 10 minutes, beginning 24 hours after operation. Local application of ultraviolet radiation in E 3 and E 4 doses were given by means of the Kromayer lamp every other day.

Rest and Exercise, Lewis Cozen. Amer. Practitioner 7: 1113-14, 1956.

Middle-aged and elderly patients with serious illnesses, because of lack of movement tend to disorders resulting from lack of full range joint movement. Immediate exercise may be better than immobilization when fracture into a joint is badly comminuted. A Colles fracture in the aged should be treated primarily as a soft tissue injury. Fracture of the femur in the aged benefits from exercise. Mobilization should be encouraged in the aged whenever possible. Several patients with trochanteric fractures were out of bed and sitting up one day after injury without immobilization and showed no ill effects. If the patient has walked on the leg after the accident and the x-ray shows no displacement, nailing of the fracture may not be necessary. Exercise is not needed after fracture in children, nor physiotherapy. Children regain motion more rapidly and more safely without danger of myositis ossificans if left alone. Inactivity of the aged is often the cause of pulmonary embolism, which in turn may lead to death from cardiac disease. Continued bed rest can also lead to negative nitrogen balance, loss of calcium through the kidneys and possible development of kidney stone. Nervous tension is also relieved by exercise. In sprained ankle with mild swelling and not too great trauma, active movement is beneficial, following preliminary spraying of the ankle with ethyl chloride, or injection of novocaine. Immobilization even with a plaster cast may be necessary if the ankle is badly swollen and painful.

Joint Manipulation in General Practice, J. M. Mennell. Virginia M. Mo. 83: 295-96, 1956.

The loss of normal joint function produces impairment of voluntary movement at the joint and pain in the joint. Pain is

relieved when function is restored. Joint play is discussed in a simple synovial joint—the second metacarpo-phalangeal joint. Its movements are described as (1) long-axis extension—the base of the phalanx is drawn away from the head of the metacarpal bone which is stabilized; thus opening up the joint space in the long axis of the finger; (2) anterioposterior glide—the joint space opening up anteriorly or posteriorly, with no relation to flexion or extension; (3) slide-bending—a movement opening up the joint space on either side and without relation to abduction or adduction; (4) rotation of the base of the phalanx on the immobile head of the metacarpal bone with no relationship to circumduction. All synovial joints anywhere in the body have a similar range of joint play. Manipulation is a maneuver which has as its purpose restoration of lost movement in joint play; it is not concerned with restoration of voluntary movement. However, movement may be restored when involuntary interference no longer prevents the articular surfaces from moving freely on one another, so that the muscles are free to move them. History of the onset of symptoms is necessary in making a correct diagnosis in joint dysfunction. Dysfunction often suddenly follows an unguarded or uncontrolled movement; pain will indicate the location of the joint affected. Pain from a simple joint dysfunction is relieved by rest and increased by activity. There is pain at the limit of movement which is relieved when the stress is removed. When both muscle and joint dysfunction occur as in recent trauma and in long-standing cases, the symptoms may be confusing, because of secondary changes in the muscles which have been in protective spasm for some time. Manipulation should not be attempted until bone and muscle diseases are ruled out. Knowledge of manipulative technique is necessary for success and safety of the treatment. Manipulation is not a treatment of trial and error. It can be disastrous in cases where there is stiffness after rest. If adhesions are thought to be present, fractional manipulation may be indicated in order to avoid joint damage and reaction. Physicians who have diagnosed a simple joint dysfunction should ask a well-trained manipulator to treat the patient, just as a patient is referred to a physiotherapist. These manipulations may be performed by the general practitioner when the curriculum of medical schools includes teaching of this branch of orthopedics.

RHEUMATIC DISEASES; ARTHRITIS

Hydrocortisone Versus Prednisolone in Rheumatoid Arthritis, M. Fisher. Lancet 2: 18-19, 1956.

The results of a 6-month trial of prednisolone, with hydrocortisone used as control therapy are described in patients with progressive rheumatoid arthritis of three or more years' duration; 13 received prednisolone and 12 hydrocortisone. The initial dose of hydrocortisone was 50 or 60 mg. daily and of prednisolone 15 mg. daily, in divided doses. Doses were reduced as side-effects (moonface and dyspepsia), or relief in symptoms occurred. The minimum doses at the twelfth and twenty-fourth weeks were: hydrocortisone 47.5 and 46.6 mg.; prednisolone 12.9 mg. and 13.2 mg. The prednisolone group showed only slightly better results. Moonface occurred in 9 of each group; 1 of the prednisolone group suffered severe dyspepsia and 7 of each group had moderate dyspepsia. Pitting edema occurred in one of each group. Despite the great subjective benefit and increase in functional capacity which the corticosteroid hormones bring for a short time, the question is raised whether such therapy is justified in view of the hazards and the secondary adrenocortical involution.

SURGERY

Experience with "Nobecutane" in Minor Surgery, K. W. Giles. Brit. M. J. 1: 727-28, 1956.

Nobecutane, an acrylic resin dissolved in a mixture of acetic esters, evaporates when applied to the skin, leaving a transparent, adherent and elastic film. It is impervious to bacteria and pervious to evaporation from the skin surface, and does not irritate or macerate the skin. Its only disadvantage is hemorrhage from wound edges when they come in contact with the dressing. During a 6-month period 48 wounds from minor surgical operations and 60 sutured lacerations were dressed with nobecutane, using the "no-touch" technique and aseptic procedure. In 9 cases where the laceration wound was grossly contaminated, a prophylactic course of penicillin was given. The dressing is easy to apply and the patient is able to continue his work. Infection occurred in only 9 cases where the wound had been contaminated by dirt and grit; antibiotic therapy was not needed, local dressings sufficed. Hemorrhage occurred in 12 cases in which there was imperfect approximation of the skin edges. In such cases a dry dressing should be applied for 12 to 24 hours, then removed and nobecutane substituted.

The Enzyme Debridement of Wounds: A Preliminary Report. A. C. Packard, Jr. Amer. Surgeon 22: 543-48, 1956.

Twelve cases are reported wherein Papain, a proteolytic enzyme obtained from papaya, proved an excellent and efficient agent for topical debridement. There was no delay of granulation tissue formation nor evident irritation of the adjacent normal skin. Several patients reported an unpleasant pruritic sensation in the skin surrounding the treated area, sufficiently annoying in two cases to stop treatment, although skin changes could not be seen. The suggestion is made that use of petroleum jelly might protect against this annoying symptom. Aqueous zephiran, instead of 3% hydrogen peroxide used as a cleansing agent may eliminate oxidative inhibition of enzymatic activity. The procedure used was as follows: A piece of gauze is applied to the affected area and soaked with Papain solution; then the gauze is covered with a thin transparent waterproof plastic material to prevent evaporation or diffusion; dressings are applied and kept in place by adhesive tape or an elastic bandage.

Wound Healing. J. E. Dunphy. Surg., Gynec. & Obst. 102: 750, 1956.

Considerable information is being obtained regarding the growth and metabolism of connective tissue through the use of electron microscopy, x-ray diffraction, histochemical staining methods, and chemical analyses. The metabolic activities of mesenchymal tissues have been revealed by aid of isotope tracers (C-14 labelled glycine, S^{35} labelled sulfate, and methionine). Connective tissue is not an inert supporting tissue, for it has been shown to undergo change in response to hormones, to metabolic disturbances, and to many disease conditions. Distinctions between alterations in ground substance, in cellular reaction, and in collagen formation can now be made. Since wound healing is a collagen disease, surgeons are making this new information of practical application.

X-RAY

A Soft Tissue Outlining Radiographic Technique, A. Shemesh, J. Shepard and R. Tyler. Army Med. Res. Lab., Ft. Knox, Ky., Report No. 247, 1956.

A description is given of a technique which shows fine bony detail and soft tissue outlines on the same radiograph. In this procedure the part to be radiographed is immersed in a commercial radio-opaque contrast medium. Surface lesions in the presence of underlying pathology are also demonstrated and are being used in diagnosis and as a teaching aid.

ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for these columns.

CALIFORNIA

At their recent meeting the California Association of Chiropodists passed the following resolution:

"Whereas, the 1956 California Association of Chiropodists at their annual House of Delegates meeting, approved by resolution, to amend the Association's Constitution and By-Laws wherein and whereby the terms of Chiropody and the degree D.S.C. be changed and transferred to the terms Podiatry and the degree Doctor Surgical Podiatry respectively, providing the N.A.C. House of Delegates did likewise and;

"Whereas, action on the amendment to adopt the terms American Podiatry Association, Podiatry and Podiatrist was tabled for further study by a special committee of the N.A.C. Executive Council, denoting considerable interest on the National level and;

"Whereas, leaders in Chiropody, in medicine, insurance companies, public relations and Federal Department of the U. S. Government have urged expediency in adopting Podiatry et al.,

"Therefore, be it resolved that the California Association of Chiropodists constantly desirous of maintaining and furthering the cause of high standards of professional practice and status comparable to the other accepted branches of medicine, hereby requests the Executive Council of the N.A.C. at their 1957 annual meeting, to present any necessary resolutions and/or amendments to effectuate this objective on the national level;

"Be it further resolved that a copy of this resolution be printed in the California State Newsletter and under Organization

"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

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News in the N.A.C. Journal at the earliest opportunity."

Submitted by,
Alameda-Contra Costa Division,
Calif. Assn. of Chiropodists

KANSAS

All officers of the Kansas State Chiropody Association were re-elected at a meeting held on April 27th and 28th.

Dr. C. R. Bittenbender of Lawrence, Kansas, lectured on "Casting and Casting Technique."

Dr. L. E. Krause gave the report of the Legislation Committee. Chiropodists have been excluded from the new Kansas Basic Science Law, which includes M.D.'s, osteopaths and chiropractors.

The Kansas State Chiropody Association has contracted with the Associated Advertising Agency, a Wichita public relations firm, to help promote Chiropody over the State of Kansas. Newspapers, radio and TV are being used.

An Honorary membership was conferred upon Dr. Anthony Rossito of Wichita, Kansas, a well-known radiologist.

LOUISIANA

The Louisiana State Chiropodists Association has elected the following officers:

President, Joseph Weinberg
Vice President, Denny Gamble
Secretary-Treasurer, Harry Wax

NORTH DAKOTA

The North Dakota Association has elected the following officers for 1957:

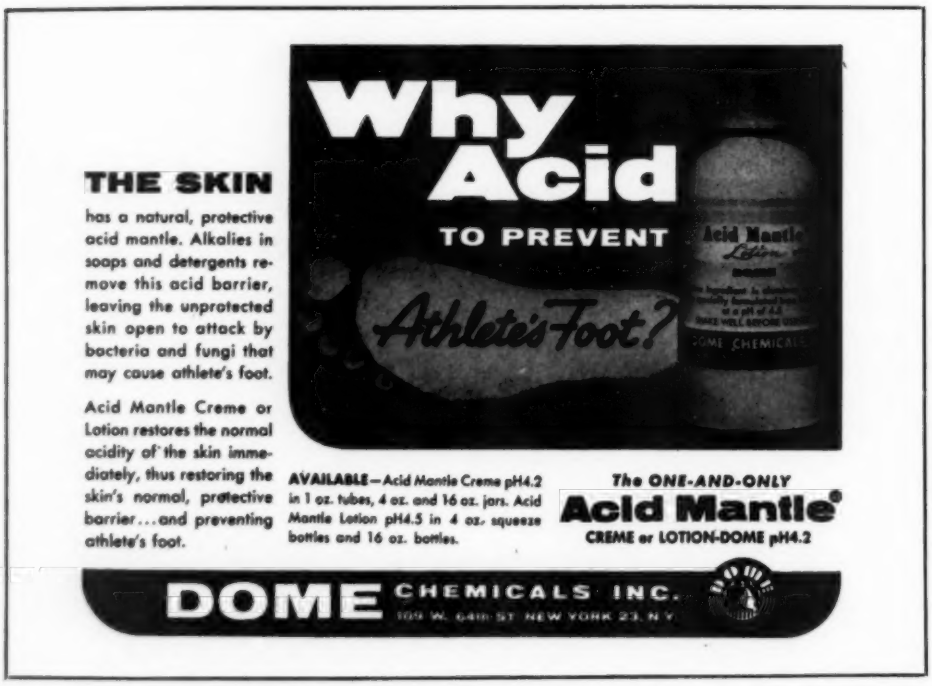
President, Dr. T. W. Cockrell
Vice President, Dr. H. R. Mark
Secretary-Treasurer, Dr. E. B. Snuff

Dr. Cockrell will also be the new member on the North Dakota Board of Registration in Chiropody for a three-year term. Other members of the Board are Dr. R. F. Peterson and Dr. E. B. Snuff.

PENNSYLVANIA

Philadelphia Chiropody Society

The Philadelphia Division of the Chiropody Society of Pennsylvania have elected the following officers for 1957-58: President, Dr. Martin Horwitz; Vice President, Dr. Leon L. Brandolph; Secretary, Dr. Alvin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VIRGINIA

The Virginia Association of Chiropodists in semi-annual session in May in Richmond, Va., voted to change its name and is now to be known as Podiatry Society of Virginia.

Dr. Albert Pincus and Dr. Ted Levy, Richmond, Va., were elected Delegate and Alternate respectively to the National Association of Chiropodists convention in Chicago in August.

The scientific program included Dr. Herman Nachman, Richmond orthopedist, who spoke on "The Chiropodist's Role in Industrial Accident Cases"; and S. P. Nyman, D.S.C., Washington, D. C., who discussed "Blue Shield and Blue Cross Insurance."

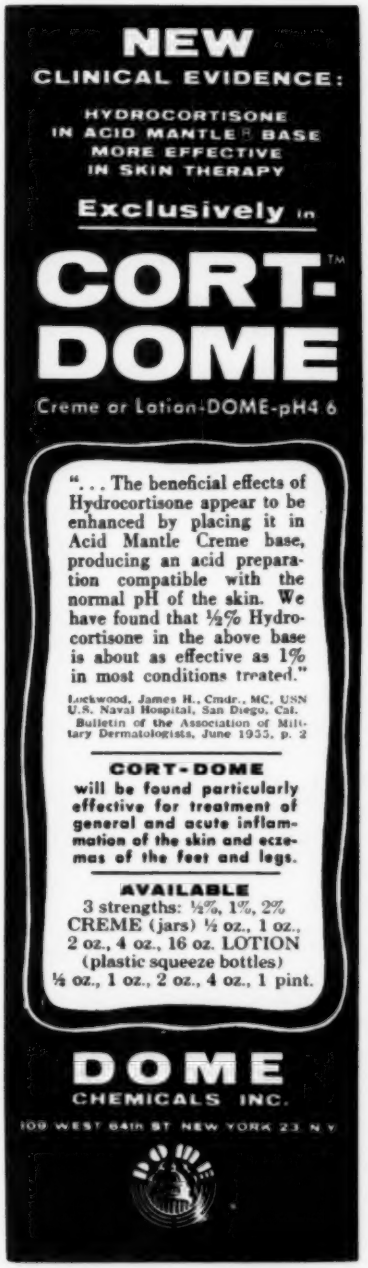
Samuel Brezak, D.S.C., New York, offered a day of lecture, discussion, slides and film on "Chiropodial Dermatology."

ROTARIANS HONOR DR. GAMBLE

Honors and recognition have once again come to the N.A.C. through our President, Dr. Felton O. Gamble. In the March issue of THE ROTARIAN, Dr. Gamble's picture appeared in the section devoted to "Rotarians in the News." Dr. Gamble was chosen as one of "Twelve men from five nations who have been named to positions of leadership by their fellow or business and professional associates."

FEDERATION OF CHIROPODY BOARDS MEETING

The Federation of Chiropody Boards will hold its Twenty-Second Annual Meeting at the Drake Hotel, Chicago, Ill. on Saturday, August 17, at 7:00 p.m. All State Board members and members of the N.A.C. are urged to attend. Judge Vera Binks, Director of the Department of Registration and Education, will be the principal speaker. Judge Binks has had ex-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Lockwood, James H., Cmdr., MC, USN U.S. Naval Hospital, San Diego, Cal. Bulletin of the Association of Military Dermatologists, June 1955, p. 2
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tensive experience in administering to the problems of thirty or more licensing professions, several of which have Federated State Boards and National Examining Boards. She has also served with a legal firm and as Judge of Circuit Courts. A question and answer period will follow her address.

MEETING OF THE NATIONAL BOARD OF CHIROPODY EXAMINERS

The National Board of Chiropody Examiners will hold its Second Annual Meeting at the Drake Hotel, Chicago, Ill. on Sunday, August 18, at 7:00 p.m. All State Board members, members of the National Board of Chiropody Examiners, college officials, and members of the N.A.C. are urged to attend.

Gerald J. Casey, D.D.S., Secretary of the National Board of Dental Examiners, will be the principal speaker. His subject will be "Organization of Material for Use in a National Examination Program." Dr. Casey spoke to the Board last year and offered his assistance and advice.

Other speakers will be LeRoy Numbers, D.S.C., Registrar, Illinois College of Chiropody and Foot Surgery, member of the National Board of Chiropody Examiners, who will speak on "How our Colleges Can Fit into the National Examination Program." G. R. Tobin, D.S.C., President of the National Board of Chiropody Examiners, will speak on "Examination Material Program to Date." The panel will answer questions from the floor.

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HALL OF SCIENCE
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Technical Developments Committee
L. C. Numbers, D. S. C.
William Ready, D. S C.
1327 N. Clark
Chicago, Illinois

LEGAL AND LEGISLATIVE

Missouri

The Missouri Legislature has replaced a section of the act relating to the state board of chiropody with a new section concerning revocation or suspension of, and refusal to issue or renew certificates of registration. Procedures and penalties are specified.

New York

A new regulation of the Public Health Council of New York permits only persons licensed to practice medicine, dentistry, podiatry and osteopathy, or technicians and nurses authorized by them, to apply radiation to human beings. It has been declared constitutional by the Attorney General of New York. This regulation restricts such persons to applying radiation to those parts of the human body which they are, by their professional licenses, authorized to diagnose and treat. It restricts the sale, lease, transfer or loan of X-ray and fluoroscopic equipment and supplies, to persons authorized to use it, and hospitals, infirmaries, medical and dental schools and clinics.

Metcalf Law: Podiatrists are included in the contract negotiated with Blue Shield for Civil Service Employees of the State of New York.

Oklahoma

May 9, 1957, Oklahoma chiropodists concluded negotiations for complete participation in Blue Cross-Blue Shield health plans.

Rhode Island

H1352 brings statute current with present pre-professional and professional educational requirements for license to practice. It permits applicants completing the requirements for the D.S.C. degree to take their theoretical examinations before completing their internship and the practical examination upon completion of the internship.

Bill H1353 permits no one other than a chiropodist or physician to fabricate or fit from plaster casts or models or any other means, shoes for specific individual persons, except on prescription.

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53 East 124th Street
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Ohio College of Chiropody
2057 Cornell Road
Cleveland, Ohio

Temple University, School of Chiropody
1810 Spring Garden Street
Philadelphia, Pa.

COMMUNICATION FROM THE PROFESSION

Dear Dr. Rubin:

There seems to be some misunderstanding about resolution No. 2 adopted at the 1955 House of Delegates of the N.A.C. which reads:

"Whereas, sufficient instances have occurred where chiropody organizations which are not affiliated with the National Association of Chiropodists have requested members of the N.A.C. to appear as speakers at their meetings.

Therefore, Be It Resolved that no member of the N.A.C. may appear as a speaker on a program of a chiropody group which does not have N.A.C. membership as a prerequisite for admission to this group and/or allow non-members of the N.A.C. to attend its lectures or scientific sessions;

Be It Further Resolved, that any member of the N.A.C. which appears as a speaker at such a non-affiliated chiropodical group be subject to charges by the N.A.C.

Submitted by
Iowa State Chiropody Association"

Where there is a heterogeneous group, i.e., of members and non-members of the N.A.C., is it true that a member of the N.A.C. may not appear as a speaker to such a non-affiliated group?

There have been complaints of members of our society of such actions, and since this is a matter of national policy, I should like your opinion in the matter.

Sincerely yours,
Irving L. Marks, Pod.D.
President, Podiatry Society of the State of New York

Secretary and Editor's Note—

Non-affiliated societies or groups which have non-members of the N.A.C. or permit non-members of the N.A.C. to attend their lectures or scientific sessions are the type of organization and meetings referred to. N.A.C. members who speak before such groups may be subject to charges brought by a member of the N.A.C.

ACCEPTANCE SPEECH

LIEUT. GEN. DONALD P. BOOTH

Deputy Chief of Staff for Personnel, Upon Presentation of the Annual Foot Health Award by The American Foot Health Foundation on May 10, 1957, Pentagon—Washington, D. C.

"On behalf of the Army, it is a real pleasure to accept from you, Dr. Hirschberg, this annual Foot Health Award.

"It gives me pride that we have been chosen for this award, for to us in the Army, the foot is still our one dependable and indispensable mass means of locomotion. While we may plan for an infantry that rides to battle in planes, helicopters, and armored personnel carriers, we know that there is not, nor will there be, any substitute for movements by foot in our final deployments and in the fighting itself.

"While we of the Army have, from time immemorial, realized that our effectiveness as a fighting force depended on the feet of our soldiers, and have recognized that fact in our earliest field manuals, it is only in the last decade that Chiropody, or Podiatry, has come into its own as a major and highly respected field of medical science in our civilian community. In line with that development, and with the full-fledged cooperation of the American Foot Health Foundation, representing more than 8000 foot doctors, the Army is now commissioning chiropodists in the Medical Corps. In fact, present with us this afternoon is Lieutenant John Charlton, Jr., Medical Service Corps, the first chiropodist to be commissioned in the Army for the purpose of practicing his chosen profession. More such commissions are soon to follow.

"Lt. Charlton, and those to follow him, will be charged with maintaining our foot health, without which any Army, no matter how fully mechanized, would be largely ineffective.

"I thank you again, Dr. Hirschberg, for this honor you have bestowed upon our Army and especially upon our infantry. We hope that, with the cooperation of your Foundation, we will continue to be deserving of this award."

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DEATHS REPORTED

Dr. Maude B. Crans
Philadelphia, Pa.

Dr. Crans, one of the pioneer chiropodists in the Frankford area of Philadelphia, passed away on May 15, 1957.

Dr. Maurice J. Lewi
New York, N. Y.

Dr. Lewi died on May 27, 1957. (See pages 346 and 347.)

Dr. Thomas H. McNally
Fall River, Mass.

Dr. McNally died on March 24, 1957.

Dr. LeRoy Potter
Butler, Pa.

Dr. Potter died on May 12, 1957.

Dr. Charles T. Traganza
Philadelphia, Pa.

Dr. Charles T. Traganza of Philadelphia passed away on June 3, 1957. Dr. Traganza graduated from Temple University in 1945. He was a clinical instructor of chiropody at Temple University and a member of the North Philadelphia Realty Board.

Dr. O. J. Grundy
South Bend, Ind.

Dr. O. J. Grundy died on June 21, 1957.

Dr. Karl E. Fuller
Detroit, Mich.

Dr. Julius Lein
Los Angeles, Calif.

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CONVENTION DATES AND MEETING NOTICES

National Association of Chiropodists
Chicago, Ill.
August 14-21, 1957
Drake Hotel

Region One
(Conn., Maine, Mass., N. H., R. I., Vt.)
Boston, Mass.
Sept. 13-15, 1957
Sheraton Plaza Hotel

Region Two
(New York)

Region Three
(Del., Md., N. J., Pa.)
Atlantic City, N. J.
April 17-20, 1958

Region Four
(Ohio)

Region Five
(Ill., Ind., Mich., Wis.)

Region Six
(Colo., Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
April 11-13, 1958

Region Seven
(Idaho, Mont., Oreg., Wash., Wyo.)

Region Eight
(D. C., N. C., S. C., Va., W. Va.)
Huntington, W. Va.
*November 15-17, 1957
Hotel Pritchard
*Note change of date

Region Nine
(Florida)

Region Ten
(Ala., Ga., Ky., Miss., Tenn.)
Montgomery, Ala.
Sept. 6-8, 1957
Whitley Hotel

Region Eleven
(Ark., La., N. Mex., Okla., Texas)

Region Twelve
(Ariz., Cal., Nev., Utah)

Missouri Association of Chiropodists
Kansas City, Mo., Oct. 11-13, 1957
President Hotel

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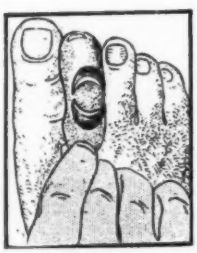
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MOOD ELEVATORS

Contributions to this column are more than welcome. In fact it depends upon them.
A.O.P.

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Home is a place where a man can say anything he pleases because no one listens to him anyhow.

It costs more to amuse a child today than it used to cost to educate his father.

The efficiency expert is a guy who believes in economy no matter what it costs.

The modern miss may not know how to cook but she always knows what's cooking.

The only man who makes money following the horses is the man with the broom and shovel.

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Maurice Seitter

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Letter to State Information Bureau

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Store clerk quoted by d'Allessio

Matrimony is a process by which the grocer acquires an account the florist had.

Frances Rodman

If you can't get away for a vacation you can get the same feeling staying home and tipping every third person you see.

The IMP

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Anna Herbert

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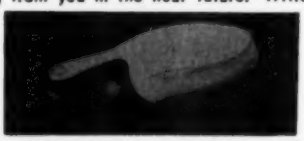

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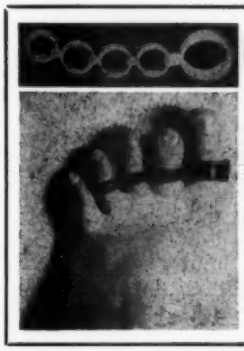

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